

THE AMERICAN School Board Journal

Founded March, 1891, by WILLIAM GEORGE BRUCE

Volume LXXV, No. 2

AUGUST, 1927

Subscription, \$3.00 the Year



Home Influence Needed.

Some Features of Administrative Rooms in School Buildings

Clarence D. Kingsley

Upon efficient administration and supervision depends in no small measure the success of the school. To provide intelligently for these functions it is necessary to know something of their range and character. The range has increased greatly in the last few years. Twenty years ago scientific supervision on the basis of well-defined standards and objectives was unknown. The scientific testing of pupils' intelligence, aptitudes, and interests was unheard of. Educational and vocational guidance of pupils was haphazard. The organization of student activities depended wholly upon the personal inclinations of principal and teacher. Physical education was limited to the work of school teams. The school remained in blissful ignorance of physical defects of pupils. Few efforts were made to acquaint the parents and community with the aims and purposes of the school. Records were simple and were carelessly kept. School accounting was rudimentary. These conditions have all changed and hence the character of administrative rooms must change also.

In all but the smallest schools, one or more clerks are necessary. Without such help the time of the school executive is squandered on work that can be done better by persons less highly paid. Without such help, the important work of classroom supervision is neglected.

In large schools, the administrative duties themselves become so numerous and require so much time that administrative assistants become necessary in order that the principal may attend to the broader needs of the school—keep in touch with the actual classroom teaching, and give constructive help to the teachers themselves.

Receiving the Public

The administrative and supervisory functions for which provisions must be made in the building include:

1. *Receiving parents and the public and giving them the service sought.* The importance of this function should determine the location of the administrative suite. A bad impression is created in the minds of the visitor when he must wander about a school building before he is able to locate the office. To him the school may be quite unfamiliar and the gravity of his problem is likely to grow in his mind with every step of unfamiliar territory that he must travel. When he arrives at last, he is likely to feel that he will probably receive a cold reception in so inhospitable a building. Hence, the main office should be on either side of, or directly opposite, the main entrance, and should be so planned as to breathe the spirit of hospitality and to give immediate attention to the problem of the visitor.

2. *A clearing house for the teachers.* The duties of the teacher are not limited to the teaching of classes. He is a part of the administrative organization of the school. He must contribute his knowledge of the abilities, aptitudes, and interests of his pupils in order that the school may intelligently deal with problems growing out of individual differences. Hence he must enter certain records. He must exchange certain information with other teachers in order that there may be intelligent cooperation. Hence conveniently located teachers' boxes are necessary.

Moreover, the main office must know whether teachers are present. Substitutes must be obtained for absent teachers. Problems arise constantly upon which the advice of a teacher is required. Delays and bad impressions are made when the main office is ignorant as to

whether a teacher is in the building. Some device, such as a board or a time clock, must be found for having this information. For this and other reasons it is generally advisable for teachers to report at the office upon entering and leaving school, and to consult the teachers' exchange located there. This constitutes a second reason for locating the main office near the front entrance.

Students' and General School Records

3. *The keeping of records.* To meet the needs of the student body it is necessary that certain records be kept regarding each pupil. These records must be available at all times to the principal and, in the large school, to certain of his assistants. The exact nature of these records will depend upon the type of school and its program for pupil guidance but every school needs records that convey real information. Then, too, certain information regarding pupils who have graduated or have left school must be kept for future reference when needed.

The value of these records is such that they should be kept in a fire-proof vault. Since they are not to be consulted except by persons having rightful claim to the information, the vault should not open off from the public reception space. In most schools efficient administration will place them under the care of the clerk or clerks. Hence the administrative suite should contain an adequate fire-proof vault for safekeeping of records, located under the direction of the clerk.

Program Clocks

4. *The administration of the daily program.* A modern school resembles a railroad in that it must run on a schedule free from errors. Special assemblies and other special occasions demand changes in the schedule. These must be under control similar to that demanded of a railroad. A program clock is therefore necessary.

Opinion differs as to the need and desirability of clock faces in the various rooms synchronized by the master clock in the office. Such synchronized clock-faces cost less than independent clocks. Objection is sometimes raised that such clocks take the minds of the pupils away from the teacher and the work in hand. The modern tendency however, is toward an increasing number of projects in which the pupil needs to consider the time element. Moreover, the teacher's watch is not always in agreement with the master clock. Hence the weight of evidence seems to favor the location of synchronized clock-faces in the various rooms, so located that both pupil and teacher may see them at will.

The master clock should provide for alternate schedules when such may be desired.

The schedule of classes, showing where each class and teacher may be found, should also be located in the main office.

THE TEACHER

"There is no calling or profession, save that of parenthood which offers such opportunities for service as does teaching. Past the teacher's desk the unending stream of youth must go—the authors, statesmen, bankers, business and professional men and women, those who are to build or wreck empires—and as they pass give the teacher his opportunity to touch Destiny.

"A phonograph can hear recitations; but teaching, that process by which one skilled in the things of the heart and brain, undertakes the task of enlarging the lives of others in all the varying possibilities of self-enjoyment and general usefulness, has always called for and had the mightiest hearts and intellects in human history."—Frank David Boynton.

5. *Control of fire drills.* The fire alarm system should include an outlet in the main office whereby a fire-drill may be originated in the main office.

Telephone Communication

6. *Telephone communication.* The modern school strives to keep in touch with the outside world. Parents and city school administrators have frequent occasion to telephone to the school. The principal, his assistants, and the teachers have many occasions for communicating quickly with parents. All these considerations call for telephone service.

Occasions for intercommunication between teachers vary in frequency and importance with the type of the school. Some administrators believe in making such intercommunication as easy as possible and state that much is to be gained thereby. Certain schools have introduced an automatic system with a telephone in every room. Other schools have a manually operated switchboard with telephones in every room. Still other schools have only a few telephones located in strategic positions.

Pay-telephone booths should probably be operated through the central switchboard to give supervision to all outgoing calls, as the school is morally responsible.

7. *Supervisory and administrative conferences with teachers, pupils, and parents.* Many of the necessary conferences that the principal and his administrative assistants must hold with teachers, pupils, and parents require for their fullest success an element of quiet mutual confidence and considerateness. These conditions cannot well obtain in an open office where many outsiders are within listening distance. In a large school the principal and various assistants should have individual offices. In small elementary schools a happy solution may be obtained by building a glass partition seven feet or more in height to give quiet but without suggesting any undesirable seclusion.

THE SPOKANE SINGLE-SALARY SCHEDULE

The single-salary schedule inaugurated at Spokane, Washington, was explained by Leona Coulter, a high-school teacher at the Seattle N. E. A. meeting. She said:

"The plan takes into consideration two factors, first, education or teaching preparation, and second, teaching experience. It is based on the theory that all teaching is of equal value and should be recognized in salary equivalent. All salaries of classroom teachers are computed on the same plan. A certain sum is taken as a basis. To this is added one hundred fifty dollars for each year of preparation beyond graduation from a four-year high school. The number of years for which salary credit may be obtained is limited to five. A summer session is counted as a fractional part of a year. In addition to the above sums, fifty dollars is allowed for each year of teaching experience up to a maximum of eleven years.

"This plan serves as an incentive toward further education and provides an opportunity for it in increased salary. It gives the teacher who prefers to work with small children the privilege of doing so without the sacrifice of salary which often accompanies such a choice.

"It establishes more amicable relations among the teachers. No one harbors a feeling of injustice or jealousy, for there are no artificial barriers toward advancement. The maximum salary is the same for all. The resulting feeling of harmony and cooperation insensibly raises the morale of the teaching corps and establishes a foundation for a solidarity and a professional unity greatly to be desired."

A Study in Special Supervision

E. W. Tiegs, Director of Research, Minneapolis, Minn.

I. Introduction

For a long time we have been telling teachers how to do their work better; they have become so inured to our lectures that they would probably miss them if we ceased. For a somewhat shorter period, we have been surveying general supervisors, principals, and superintendents until they too feel fairly comfortable when being analyzed, appraised, and advised.

The position of the special supervisor, on the other hand, has been unique. He has often blossomed full bloom into his profession without serving that very important apprenticeship at the rank of teacher, which has usually been required of principals and superintendents.

General supervisory officers have often covered fields far too large; the pressure of work has made it natural for them to give less and less time to special fields. In many cases, special supervisors have been left almost entirely alone. Principals and superintendents have functioned in the academic subjects, but in special subjects the special supervisor's authority has often been unquestioned.

However, a new concept of the status of the principal is developing, particularly in large cities. The special supervisor no longer thinks of himself as a czar interested in a single department and its development, but rather as an individual whose first object, like that of members of the general staff, is service to childhood. The principal must add to his accomplishments those of the special supervisor, and be the responsible head of his school. If his strength is insufficient for the task, he must surrender; but in the transitional stage, compromises must be worked out.

This readjustment naturally involves a survey and analysis of the work of special departments. It involves an evaluation of technics by which special supervisors attempt to reach whatever objectives they set up. It involves an evaluation of these various objectives themselves to see if they be in harmony with the more general objectives of all education.

It was with this feeling that a general change was taking place in supervisory organization, objectives, and methods, and not with any critical feeling toward any of the special departments studied, that this study was undertaken. Twenty special supervisors in eight different fields cooperated in furnishing the data upon which this study is based.

II. The Problem of Special Supervision

Special supervisors are employed to a large degree on the theory that the classroom teachers cannot teach and the principals cannot supervise the work of these special departments satisfactorily. No one has ever determined the degree to which this assumption is justified in each of the various special departments. However, assuming that the need for special supervision exists (and this is rather generally accepted), we know from our comprehensive scientific work in individual differences that the extent of these needs will vary in many ways as between the different departments. Among these variations are the following: The needs of special supervision are conditioned by the number of teachers to be supervised; by the relative training and efficiency of the teachers represented in the department; by the types of pupils represented in various sections of the city; by the particular molds in which courses of study are cast; and by the interest, training, ability, and cooperation of the various principals.

The extent to which supervision is efficient,

therefore, depends upon the extent to which these various factors are recognized in supervisory organization and activities. For example, no one would long employ a physician who used but one remedy for all ills, even though he knew that these ills differed in kind and degree and he attempted some diagnosis. We may readily suspect that supervision which exploits identical types of supervisory activities, regardless of the needs of the particular teachers and buildings, is just as illogical and unscientific. Similarly, it is extremely important, in order to avoid an unnatural variation in supervisory costs, the rise of false ideas about the relative importance of departments, and the tendencies to friction between the departments, that the amount of supervision be definitely related to the size of the supervisory field. And surely where the principal of a building knows little or nothing about the work of a special department, and where the teachers are in a similar situation, it is an obligation on the part of the administration to see that such principals receive more personal contact with supervisors, and that teachers likewise benefit more, both from the help of the supervisor and the principal in order that the children of such districts may receive their fair share of training in this field.

III. The Survey Technic

Each supervisor kept for one week an eight-column daily report on which various items were recorded. The following figure represents the headings of one of the report blanks:

1	2	3	4	5	6	7	8
Time	Code No. of activity	Time Totals	Name of classroom teacher. No. of other teachers involved	x, y, or z	a, b, c, or d	What did regular teacher do?	Details concerning activities of supervisors, teachers, and pupils. See general directions
8:00	14	15					Walked
	12	15	Prin. and Supv.	x	a		Arrived at Latta School. Schedule for day completed.
	1	30	Miss Jones	y	c	Observed: asked questions.	Demonstrated use of flash cards; teacher grasped technic quickly.
9:00							

In column 1 was a time scale from which lines were drawn to show when one activity ended and another began. In column 2 were placed the code numbers (see note below) of the activity engaged in at any particular time. Column 3 served merely to facilitate in summarizing the amounts of time devoted to each activity. Column 4 served to locate the particular classrooms in which supervisors were working and to keep account of additional teachers who profited. The purpose of column 5 was to discover by whom each supervisory activity was initiated: An *x* meant that the

principal had requested it; a *y* meant that it was requested by the teacher; and a *z*, that the supervisor was doing it on his own initiative. Column 6 concerns the principal entirely and served to show how much of the supervisor's service he was observing: An *a* meant that he had stayed through the whole activity; a *b* that he had been present more than half the time; a *c* that he had been present some, but less than half time; and a *d* that he had not been present at all. Columns 7 and 8 are self-explanatory.

The following list of activities was suggested. Supervisors added many more.

Code No.	Activities
1.	Building demonstration teaching.
2.	Sectional demonstration teaching.
3.	Class observation.
4.	Building meetings.
5.	Sectional meetings.
6.	Conferences with teachers.
7.	Conferences with principals.
8.	Preparation of bulletin on use of texts materials, techniques, etc.
9.	Tests. Construction, use, etc.
10.	Texts. Distribution, control, etc.
11.	Teachers. Rating, recommendations, etc.
12.	Supervisory schedules.
13.	Exhibits. Kinds, for whom, etc.
14.	Travel. Between schools, to conventions, etc. Give mode: walking, auto, bus, train, etc.
15.	Correspondence, subjects, amount, etc.

IV. Some Survey Results

In Table I is presented the actual number of minutes of supervisory service reported for the week by the twenty supervisors who kept the daily report. This service is distributed on two bases: First, in the three columns headed I, according to who initiated it; and second, in the four columns headed II according to the extent to which it was observed by principals.

Percentages computed from the totals on the ends of these columns reveal the following facts: Approximately 11 per cent of all actual supervisory service (these data do not contain time spent on travel, lunch periods, recesses, etc.) was initiated by principals; 12 per cent by teachers; and 77 per cent by the supervisors themselves. Principals observed about 23 per cent of the supervisory service in its entirety, remained with the supervisors more than half-time in 5 per cent of the service, less than half-time in 4 per cent of the service, and did not observe at all approximately 68 per cent of this special supervisory service.

Columns III and IV show the total minutes served by each supervisor, and the number of teachers supervised respectively. Columns V and VI show the average weekly service by the supervisor in each department, and the average number of teachers per staff member supervised by each department, respectively. There is considerable variation in the time spent by individuals as well as between averages for different departments. For example, the average service for the home-economics department is 143 per cent of that of the music department; and the individual giving the largest amount of service gave more than 200 per cent as much time as the individual giving the least service. There was also a wide variation in the number of teachers reached, the range being from 20 to 447. In two or three instances, meetings contributed to the large totals.

Converting the data in Table I into departmental percentages, we obtain Table II.



TABLE I—TOTAL ACTUAL SUPERVISORY SERVICE REPORTED FOR WEEK
(In minutes)

Department	Supervisors No.	Total Service Principals	Supervisory Service Observed by Principals				Totals (I and II are Equal)	Number of Teachers Supervised	Average Weekly Service by Departments	Average No. of Teachers Supervised by Departments
			Initiated by Supervisors	In Full	More than half	Less than half				
Art	1	305	310	2102	645	0	2072	2717	.....	.....
	2	785	522	987	435	255	1444	2204	2426	152
	3	235	1275	860	715	210	1220	2370	.....	.....
	4	215	920	1188	575	445	1213	2323	.....	.....
Writing	5	115	30	2074	10	0	2200	2210	.....	.....
	6	1140	130	670	935	115	730	1940	1995	211
	7	1375	75	375	850	185	735	1825	.....	.....
Music	8	60	75	2935	1155	285	0	1630	3070	150
	9	45	0	1460	915	215	80	295	1505	85
	10	120	20	1310	695	145	160	450	1450	74
	11	90	100	1480	665	60	0	945	1670	110
Nature study	12	220	785	950	1045	0	60	850	1955	447
Home Economics	13	210	135	2605	255	0	0	2605	2950	39
	14	0	390	2155	0	45	0	2500	2545	69
Manual Training	15	0	145	2075	55	0	105	2060	2220	20
Physical Training	16	0	15	2030	165	0	0	1880	2045	47
	17	80	120	2385	250	0	180	2155	2585	317
	18	15	15	2535	285	0	225	2055	2565	304
Special	19	100	140	2490	475	0	180	2075	2730	126
	20	15	375	1315	30	0	0	1675	1705	22
Total Minutes		5125	5677	33981	10155	1960	1680	30888	44683	
Percent		11%	12%	77%	23%	5%	4%	68%	100%	

TABLE II—SPECIAL SUPERVISORY SERVICE DISTRIBUTED ACCORDING TO DEPARTMENTAL PERCENTAGES

Department	Per cent of Supervisory Service Initiated by			Per cent of Supervisory Service Observed by Principals			
	Principals	Teachers	Supervisors	In Full	More than half	Less than half	Not at all
Art	16	31	53	25	9	5	61
Writing	45	4	51	30	5	4	61
Music	4	3	93	45	9	3	43
Nature Study	11	40	49	53	4	3	40
Home Economics	4	9	87	5	1	0	94
Manual Training	0	7	97	10	0	6	84
Physical Training	1	2	86	11	0	4	85
Special	3	11	93	2	0	5	93

TABLE V

Department	Per cent of total supervisory service spent	
	In the schools ¹	In indirect service ²
Art	57	43
Writing	44	56
Music	77	23
Nature Study	78	22
Home Economics	59	41
Manual Training	22	78
Physical Training	64	36
Special	50	50

¹Includes demonstration teaching, class observation, building and sectional meetings, conferences with principal and teachers, and other activities in schools directly related to the improvement of teaching in the special departments.

²Includes preparation of bulletins, courses of study, and all other indirect service.

No department, except that of handwriting, shows any marked tendency to be called upon for service by principals; in art and nature study, teachers apparently request this assistance to a moderate extent; but to a large degree, special supervisory service during this week was initiated by the supervisors themselves.

In art, writing, music, and nature study, principals observed from 25 to 53 per cent of the supervisory service in its entirety; but with the exceptions of music and nature study, most of the service was not observed by principals at all.

Table II is based on all special supervisory service rendered, whether in the schools, the office, or elsewhere. Obviously, principals would not be expected to observe office work or other types of service performed away from the schools. When all such types of service have been eliminated and percentages computed only on such activities as principals could observe, we obtain the data presented in Table III.

TABLE III—EXTENT OF OBSERVATION BY PRINCIPALS

Department	Per Cent of Direct Service Observed			
	In Full	More than half	Less than half	Not at all
Art	39	15	8	38
Writing	63	11	8	18
Music	56	12	4	28
Nature Study	68	10	4	18
Home Economics	10	2	0	88
Manual Training	8	0	16	76
Physical Training	13	0	9	78
Special	22	0	10	68

This computation serves, of course, to increase in every case the percentage of supervisory service observed in full and to decrease the part not observed at all. The most significant change takes place in the case of handwriting where the per cent of service observed in its entirety is more than doubled and the part not observed at all reduced from 61 to 18 per cent.

Table II is significant in this connection because it gives a rather significant measure of

the contact of principals with the special supervisory program as a whole.

The next significant data of the survey concern the principal types of direct supervisory activity. Table IV presents, by departments, the relative percentages of supervisory service devoted to five types of activity.

The percentages of Table IV are not based on the total service of each department, but on the service devoted to the five particular activities considered. The purpose of the table is to exhibit differences in emphasis in the types of supervisory techniques employed. Four departments seem to rely largely upon demonstration teaching; three spend a major portion of their time in class observation, and one divides the time almost equally between class observation and conferences with the teachers. In addition, the art and special class departments make a rather free use of teacher and principal conferences, and the supervisor of nature study, of conferences with principals.

In addition to the types of supervisory techniques employed by each department, it is important to know approximately what portion of the time of supervisors was spent in the schools in direct supervisory activity, and what portion was devoted to office work, preparation of bulletins, exhibits, and other activities which contribute indirectly. These data are given in Table V.

DR. RICHARD B. DUGDALE
President of the School Board, South Bend, Ind.

TABLE IV

Departments	Per cent of time devoted to these five activities used for:				
	Demonstration	Class Observation	Meeting	Conferences	Principal
Art	64	0	2	15	19
Writing	80	0	0	11	9
Music	85	6	2	3	4
Nature Study	64	0	6	0	30
Home Economics	0	43	0	42	15
Manual Training	0	82	0	10	8
Physical Training	10	68	2	11	9
Special	4	62	0	24	10

Table V reveals a wide variation in the amount of direct supervisory service, the range being from 22 to 78 per cent. Other things being equal, departments should be able to give approximately equal portions of their time to direct service in the schools. This table seems to indicate that some departments are loaded with additional duties, or that they are not so well organized and not functioning so adequately as others.

A study of column 4 of the survey sheets revealed the fact that some of the departments are definitely committed to the policy of taking teachers of one or more grades out of their classrooms to observe demonstration lessons, and that such classrooms are left without teacher supervision during these periods. Column 7 of these sheets showed that the classroom teachers, as well as others, almost invariably "observed and asked questions." Column 8 of the survey sheets showed a wide variation in the types of supervisory activity. It is impossible to evaluate this service (in fact it was difficult to identify some of it clearly) from the limited descriptions possible in the space provided. It appears, however, to center on significant aspects of the work of the various special departments, and from such evidence as exists, to be of a high quality.

(To be concluded)

DR. DUGDALE REAPPOINTED TO SOUTH BEND SCHOOL BOARD

Dr. Richard B. Dugdale, who was reappointed on July 15 to his fourth successive term on the school board of South Bend, Indiana, has begun his tenth year as a member of that body. Dr. Dugdale has been president of the school board for the past eight years and has completed nine years as a member.

Dr. Dugdale was first appointed to the board by the mayor and was later reappointed at the expiration of his first three-year term. He was again reappointed by a succeeding mayor, and his present reappointment comes at the hand of a third mayor.

During Dr. Dugdale's service on the board, the city has seen its greatest growth and the school population has grown by leaps and bounds. With the growth has come the modernization of the school system and the building up of a new and efficient school plant.

Some Aspects of Heating and Ventilating School Buildings¹

H. W. Schmidt, Supervisor of Buildings, Department of Public Instruction, Madison, Wis.

The problem of heating and ventilating school buildings assumes proportions which are not readily appreciated. In a recent report of the United States Bureau of Education it was stated that 26,458,655 pupils of all ages were enrolled in and attending some kind of school, either public or private. (These figures are based only on reports received by the bureau.) When we remember that many institutions either do not fill out these reports at all and some give incomplete data, it seems quite possible that we have to do with the housing conditions, at some time or other, of nearly one third of our national population—an astounding number.

The rural districts are credited with 186,532 buildings, while the cities of 2,500 population or over are estimated to have about 57,000 more, a total of almost 250,000 buildings. These buildings range from the one-room structure housing a half dozen children, to the palatial cosmopolitan high school, accommodating 4,000 or 5,000. It is no wonder that some of the best engineering talent of the country is interested in this vast problem of providing proper air conditions for 35 millions of human beings.

Not only is it a problem of *trying* to do the best we can, but we *must do so* for an ethical reason, if for no other. If a building is improperly constructed, unsafe, or poorly heated or ventilated, then we stay away; we are not obliged to enter or stay in it. The public school, however, is a different matter. Our attendance laws require children to attend school and *remain* there for from four to six hours per day, five days a week, and for ten months of the year—they have no choice. Under these conditions it is our *duty* to provide an environment which is hygienic and conducive to physical comfort.

Comfort Essential to Mental Work

It has not yet been established that cold feet and a warm head or a temperature of 80 degrees with a relative humidity of 20 per cent or even roasting on one side of the body next to a radiator and subjecting the other side to cold drafts, are conditions conducive to facilitating the learning process. We are still of the opinion that it becomes necessary to provide a reasonable condition of comfort, if we desire efficient mental concentration on the child's part.

Unfortunately or fortunately, as you may take it, we are now not sure what constitutes comfort or what exact air conditions are necessary to produce optimum comfort, both physiological and psychological. Do not misunderstand, however. We have made progress, much progress, since Pettenkofer's dictum, that the evil effects of the air in a poorly ventilated room are due to some kind of organic poison given off by the human body. The carbon-dioxide theory of ventilation is also a burst bubble. But we are still on a 30-cubic-foot-of-air-per-child basis. This remnant, based on old assumptions, is still with us and I have not yet been told by anyone, nor have I seen it in print, that this amount is scientifically correct. This is aside from the point that a certain amount of *primary* or *outside* air is required, upon which all agree. The 30-cubic-foot quantity is a concomitant factor of the older theories. Personally I am not worrying much about that part of the problem—we shall have more exact data on that, too, some time. But what should engage our atten-

tion is, What are the primary essentials of air conditioning? and, How may they best be met by reasonable standards of practice?

As stated before, air conditioning is *the* problem in any secondary occupation and of greatest importance in school buildings. We are sure that among some others there are a few outstanding factors which should be borne in mind when speaking of ventilation. These are (a) a certain amount of fresh air, (b) tempering the air supply usually adding some heat to it, (c) some air movement about the body, (d) a certain percentage of humidity, (e) and some means of providing *clean* air where dust and dirt contamination are evident. The quantitative relationships existing among some of these items is primarily one determined empirically (experimentally) or based on individual reactions, the latter being of great importance. Unscientific as it may be, we are dependent upon the subjective reaction of the individual for a goodly share of our standards in this direction. Individuals will feel cold or hot in spite of engineers' formulae or health specialists' dicta. One error we have fallen into: We are too prone to accept the reaction of the adult, and do not concern ourselves enough with those of the child, for whom, primarily, air conditioning is brought about. Scientifically we are not sure of our ground, though we are progressing in this direction.

Control of Ventilation the Problem

Taking it on the whole, and in a sensible way, we are confronted not so much by the variables of the items previously mentioned as we are by a more important factor, that of their control. Without this our problems become a hundred-fold more complex, and in fact they are impossible of solution. What behooves it if we have tempered *fresh air* in motion, with humidity and clean air, if we have no means of controlling these variables from time to time as atmospheric conditions change and call for readjustments? The problem is not one of simulating outdoor conditions at all, as some seem to think. We are concerned with a group of individuals who perforce are tied down to their seats by their work and *who cannot do their best unless they are provided with a reasonable amount of moving, clean air (at a proper temperature) conducive to carrying off surplus body heat at a reasonable rate.* In most cases outside air will not meet these requirements, as the conditions cannot be controlled. In cities and congested areas, this matter of control assumes sometimes huge proportions, much greater than in the open country, and even here conditions are by no means perfect.

The influence of physiological comfort upon "psychological comfort" or mental effort is so well established that no point need be made of it here. Anything which contributes to the closeness of this relationship is well worth while, and even the maligned report of the New York Commission on Ventilation brings this to the fore and offers proof. The educator and school administrator is of course fully aware of this side of the problem and usually lends his support to any scheme which will bring about this proper relationship.

Unfortunately the same statement cannot be made with reference to the general public, school patrons or even many school-board officials, especially in the smaller communities. With so many it is a problem of supplying heat, and it is surprising how little attention is paid to providing either air movement or air supply so necessary to comfort. Fortunately movement and supply are somewhat in evidence where any heat is provided. Much education of school

officials is needed, and a knowledge of the elementary theories of air movements and concomitant ventilation problems should be necessary equipments of those responsible for the physical administration of school plants.

The Urge of Economy

Interestingly enough it is not always a case of ignorance; just as often there are other factors which affect the situation. The fact that an elaborate and efficient equipment is provided for heating and ventilating a building is no criterion that it will either be operated consistently or judiciously. And we need not go to the smaller cities or the country to find this operating problem confronting us, especially as regards ventilating apparatus. Nearly fifty per cent of the cities having such equipment do not operate it consistently, as recent investigations show. Air washers and filter are shut down; it costs too much to operate them. Fans on one hundred-per-cent-blast "jobs" are shut down and the system is used as a gravity job until cold weather *forces* operation; it costs too much. Split heating and ventilating systems are notorious offenders in this respect, as usually enough direct radiation is provided to supply heat losses and the air supply apparently is an incidental matter. Gravity-indirect systems for ventilating purposes are nearly always useless.

It is interesting to note that the failure of apparatus to perform and create proper air conditioning in the above situations is due to lack of control. The systems are left to the vagaries of wind and weather, to kind Providence, and to the ingenuity of the designing engineer who has developed systems which have such a large margin of safety that parsimonious human desire to the contrary, the "jobs" do give some assurance of functioning. The pity of it is that the results, both immediate, so far as comfort is concerned, and remote, so far as the learning of the child is involved, may be so much better if this problem were approached by all concerned in an earnest and cooperative spirit. We need must educate here!

This problem of consistent operation is one of plain common sense. If air conditions warrant the installation of washers, then they should be operated. If the design of the building calls for a "blast job" to furnish air and heat, then the fan should be operated. If air conditioning calls for a humidity supply and control, then this should be provided. It is taken for granted that unbiased engineering service was had originally. If experience shows any device is not needed, due to changing conditions, then it had better be removed.

The Fetish of Closed Windows

At the same time it is to be conceded that there is oftentimes too slavish an adherence to certain operating rules. If the tempered air in a split system is able to provide for heat losses for a good share of the year, then it is common sense to cut off the direct radiation and run the fans to both heat and ventilate and not necessarily operate both direct and indirect radiators under these conditions.

Again, I am not at all sure that the edict, "keep windows closed," used as an operating slogan in a split or blast system is at all times defensible. I know the argument full well, that it *unbalances* the system and some rooms get more air supply than others. It is, however, very doubtful that this matter should be carried to such an extreme as to threaten a teacher with discharge if she opens a window. It is also a matter of observation that opening some windows does not produce deleterious effects and that the *unbalancing* is more of a phrase than an actuality. I have plenty of data to prove

¹The writer of the present paper has had the opportunity of officially inspecting hundreds of school buildings in Wisconsin and other north central states and has passed upon hundreds of plans and specifications for proposed school buildings to be erected in Wisconsin. His vigorous expression on the theory and the problems of school ventilation was one of the features of the convention of the National Association of Public-School Business Officials, May 20, 1927.

this. For example, among other buildings, I tested a school recently where a split system was installed. The fans, for a wonder, were delivering an air volume close to the theoretical 30 cubic feet per minute per child, in the seven rooms tested. The vents were taking care of from 36 to 61 per cent of the air delivered; the balance was to be accounted for in leakage. An open window did not materially change conditions except in one room on the windward side where the air supply via inlet was reduced 4 per cent and the exhaust increased 14 per cent. And yet the engineer, janitor, principal, and superintendent threatened the teachers in this school with dire punishment if a window were opened.

It has been found that overheating is the *bête noir* of the schoolhouse problem, the cost of operation notwithstanding. This also in spite of automatic control. It appears, and I have proved it many times, that the thermostatic setting of 68 or 70 degrees Fahrenheit is not at all a criterion of the general temperature conditions in a room at large. Too much reliance is placed upon this setting. For example, a case of bad practice, gave temperature variations from the lowest of 69 to 76 degrees at the breathing zone taken at eight points in the room, and yet the thermostatic setting was 69 degrees, and it was accurate too, as subsequent tests showed. The effect of air motion at that point, in addition to rather high conductivity of the wall here, gave rise to the difference. I have found more cases of this kind than would be expected. Some experimentation is necessary to arrive at proper results. Looking at a thermometer periodically is inane unless proper operating conditions follow in its wake.

State Control Necessary

In my field work, which is quite extensive and covers all kinds of schools, jobs, and conditions, I hear from many sides an objection raised to authoritative control of school-building and school-heating-and-ventilating design or rather to supervisory authority controlling design. It is to be granted that if all designs for heating and ventilating layouts were developed by first-class competent engineers, there might be little need for supervisory checking. In many cases this condition is met and good jobs result. If this were universal the incompetent and inexpert designer would soon starve; but good architects are now doing little with this part of their planning and are leaving it to the consulting engineer. As a matter of public policy and to safeguard the inherent rights of the school children, it becomes necessary to have some supervisory agency which will be responsible for the proper installation and operation of heating and ventilating devices in schoolhouses; and this is entirely aside from the matter of standards. Therefore, heating and ventilating codes, either state or local, are necessary.

So far as these standards are concerned, there can be little quarrel of essence as no one can *prove* his own are correct. We do not *know* whether we always need 30 cubic feet of air per minute per person; we do not *know* whether 68 degrees Fahrenheit is the correct temperature, when humidity percentages are permitted to vary from 30 to 60 at this temperature; we do not *know* whether air should be recirculated from 56 to 80 per cent of that supplied to a schoolroom, as somebody contends. As a matter of fact, I have checked up dozens of schools where one and all of these *standards* have not been met at times, and yet the results have not been fatal. The matter of control again intrudes itself. But lest I be again misunderstood, it is pertinent to say that within reasonable limitations there are *accepted standards* which are of proven value and are used as a basis of design and many, such as the calcula-

tion of heat losses, efficiency of heating devices, etc., have reached a real scientific altitude. It is only those *standards* which are of subjective interpretation which are at times in question. It is to the credit of the engineer that he is not satisfied with present accomplishments and is constantly striving for additional light and information. Only in dissatisfaction is there progress.

The Objection to Authority

To come back once more to this matter of authority: There are several classes of individuals who object to it. First, there is the man who objects to it for no particular reason except that he believes in "liberty," whatever that is. Second, there is the person who objects to authority or supervision because it is authority; he can advance no particular reason against it, but "just does not believe in it." The opinion of these classes is worthless. In the third class are those who believe the regulations set up are onerous, too severe, or improper. They are usually sincere in their beliefs but cannot as a rule prove they are right. Here it is good common sense to defer to the expert whose opinions (many opinions of many, many experts) are contained in and make up standards and codes. Then there is the engineer whose opinions are based upon much experience and who conscientiously believes he is right and usually can offer proof for his views. He is the one who counts and whose efforts make for progress and result in code changes. Individual opinion to the contrary, codes do give better layouts as a matter of practice and observation, than if no standards were set up.

It does not seem necessary to discuss the relative merits of the various common systems of heating and ventilating. Probably all of you have had much experience with them and are thoroughly familiar with their theories, operation, and relative value under varying conditions. There is no *one* system; all have their limitations which are clearly realized by the engineer and those selling them. The furnace jobs are being improved and are coming to the front in a number of very large installations. Steam jobs, both split and all-blast, are constantly being improved, and even the lowly one-room schoolhouse which has received the least attention is now provided with jacketed stoves or small furnaces which are fourfold better than those of even ten or fifteen years ago.

There are now being brought to our attention, quite forcibly at times, two systems of ventilation which it may be well to discuss briefly. They are the unit-room ventilation and the so-called window ventilation.

Unit Ventilation Problems

Unit-room ventilation is receiving increased attention both from engineers and school officials. These systems have many good points,

SCHOOL ADMINISTRATION

School administration is not something that can be carried on by rules, regulations, and orders. The highest type of efficiency is that which recognizes human relationships. School teachers, like other people, work for a living, but if their work is to count as a distinct contribution to the welfare of mankind, there must be a real liking for their work and a pride in individual accomplishment.—Service of head and hand can be bought and paid for, and the return for the money paid will be a fair day's work. But the surplus of service, the loyal cooperation, and the desire to do good work as individuals for the benefit of the whole school and because of a group pride in the school—these things cannot be bought and paid for in dollars and cents. This type of service cannot be commanded through rules and regulations of the administrative organization, but no organization can properly be termed "efficient" in the best sense unless this kind of service is the dominating influence of the organization.

—W. C. MCGINNIS, Superintendent, Revere, Massachusetts.

such as a high diffusive factor, more independence, small vent-flue areas, and good control. In practice I have found nearly every unit tested to be delivering the proper and rated air volume. Improvement has led to the virtual elimination of the fan noise and in fact I have heard plenum systems more noisy than the room ventilator. The matter of teacher control is, however, a delusion. The teachers have plenty to do besides tending to the unit and they forget all about it. On the other hand, centralized or janitorial control also leaves something to be desired. I have found plenty of units running at reduced speed to save fuel and expense, as the major heat losses were being taken care of by direct radiation. Consequently, air supply was at a low ebb and in some instances shut off entirely. Here, as elsewhere, education is needed. Probably an all-blast job could serve best here, but I could almost wager that the units would be operated as gravity jobs—in fact I have seen them so operated. The main objection to these units is their lack of humidity supply—at least a reliable, well-designed and controllable one. No doubt this problem will also soon be solved.

Due to the high velocity intake, these units should be provided with efficient filters, especially as much of the air is taken in close to the ground and near streets, playground, etc. Under these circumstances these units are likely to discharge much dust and dirt. These units also lend themselves rather well to modernizing old steam jobs of the gravity-indirect type and where ventilation is entirely absent.

It is with some temerity that I touch upon the so-called window ventilation, which, of course, is not window ventilation at all, as we think of it. There has been so much discussion of this topic, some quite temperate and much not so, that I shall confine myself to just a few outstanding factors.

Window Ventilation in the North

It may be conceded that in some parts of the country *some* ventilation may be provided by the use of open windows, especially where weather conditions are quite constant or not severe. But how this problem is to be solved in the Dakotas, Minnesota, Montana, and even in Michigan, Wisconsin, or Iowa, etc., where temperatures fall to minus 30 degrees Fahrenheit and lower quite frequently, has not yet been stated.

The general statements made regarding this going-back-to-nature system are that it promotes health, is much cheaper than other systems in both operation and first cost, and that it is simpler and devoid of complications (New York Report). And yet in nearly every instance no mention is made of the fact that room sizes must be very materially increased, that this entails greater heat losses and consequently more fuel consumption, that larger vent ducts must be installed, that an inefficient means is used to temper the air, that south and east exposure of rooms is taboo and more important than all else, that effective control is virtually lacking.

Quite recently a number of studies have been made on the basis of both standard plenum systems and "window ventilation." The theoretical results as well as the practical ones certainly do not bear out the statement that we are wasting millions on mechanical ventilation. What there is about this means, except "gentle and variable air currents and movements" (?), which present systems cannot supply as well and with less expense, is to be still proved. The New York Report certainly does not prove it, nor say so, for it recommends mechanical systems with the other in the same breath. It is hoped that the Rochester, N. Y., experiment will give us sci-

(Concluded on Page 152)

Principles Governing Management and Accounting for the School Plant

Prof. Fred Engelhardt, University of Minnesota

(Continued from July)

Accounting for the School Plant

The possible losses that may come from the failure to appreciate values when cash is converted into goods has already been pointed out. When the accounting aspects of school administration are properly correlated with the educational service demanded of the plant, the public can expect a maximum continued service, from the property made available, at minimum cost. The dependence of school-plant management upon records and accounting reports becomes more clearly evident as one considers this fact and the other principles outlined above. The records and accounts to be kept are determined largely by the information that management needs. The executive can more intelligently formulate policies for the management and financing of the school plant after an analysis of carefully-prepared reports.

The accounting procedure adopted for the original purchase and payment for the various property elements is practically the same as that involved in the purchase of supplies, or the payment for services. After this original purchase the accounting of property differs materially because of the time-service factor. Time changes values and this variation in value makes it practically impossible to account for property on an absolute basis. It becomes frequently necessary to estimate values, and in turn the better the accounting the more reliable and useful will be the estimates.

Current Expenditures and Capital Outlays

There has been much confusion in contrasting current expenditures and capital outlays. The differences between the expenditures made by a school district for current needs and those made for property are in reality only relative. Supplies and services are usually consumed during use, while the plant continues in existence and renders service year after year. Because of the extended time element school-property expenditures have been referred to as public investments. It is questionable whether such expenditures are investments any more than the payments for current supplies or service. In considering property accounting and management it is important to view current expenditures and capital outlays in their relative aspects.

Property may be paid for in one of three ways. It may be paid for from reserve funds accumulated in advance, currently, or on the "pay-as-you-go" basis.¹⁵ Property may also be bought and paid for out of funds received from bond sales.¹⁶ Irrespective of the method of purchase the relationship between the funds and the property is lost as soon as it is made available for use. The holders of the bonds have no lien on the property purchased with the funds received from the bonds.¹⁷ The financial plan to provide the funds for the necessary plant expenditures is the important problem for the school executive to consider. In making such a plan educational management is confronted with three major problems, the financing of the current educational program, the financing of the service needs or plant program (including indebtedness), and the inter-relationship of these two. Unless they are considered together, the cost of the service requirements, or the debt burden incurred to provide them, may directly restrict the current educational needs. Under such circumstances the generation of children passing through school are required to shoulder the burden through the curtailment of the educa-

tional offering due them. This is well illustrated by the following example:¹⁸

Year	Valuation	Indebtedness
1924-1925.....	\$956,318	\$193,000
		Current tax rate
		(mills)
		63.9
		Increase tax rate re-
		quired to meet
		bonds coming due
		(mills)
		26.7

It is quite obvious that the current program cannot be expanded with such an annual increase in tax rate (26.7 mills) for debt service. In fact, under these circumstances, a call for retrenchment can normally be expected. Adequate planning and accounting could have forestalled this situation.

The important problem to be considered in the relationship of current expenditures and capital outlays is that each year must pay its fair and proportionate part of the plant cost. What constitutes a fair distribution of cost is a problem to be solved. The question of the period over which plant cost should be distributed is also an important one for consideration. It is a function of management to solve these problems and for accounting to help supply the facts.

Values of School Plant

The time-service element creates in property many values. The value attributed to property at any one time depends upon the purpose for which the value is desired. It has already been pointed out that these values are frequently estimates, and require precaution and discretion in their use. School districts are not taxed, and never contemplate selling out. School property is not influenced by a number of such motives as make salable or taxable values important considerations.

When a public-school enterprise is contrasted with the money value of property in private business, it appears that the value of the school property is measured primarily in terms of its service value. In general the elements of a school plant should be so selected, located, constructed, maintained, and operated, and in fact so adapted to the service needs, that the long-run cost may be a minimum and the service

¹⁵Robbinsdale Survey. Fred Engelhardt. University of Minnesota.



THE MOST TYPICAL AMERICAN SCHOOL GIRL.

The original of the above delightful portrait painting, Ethel Winter, age 13, was selected as the typical American school girl to greet Capt. Charles A. Lindbergh during his visit to New York City. She is the daughter of Mr. and Mrs. Benjamin Winter and is a pupil of Public School 93, New York City. (Photograph by Wide World Photos.)

use a maximum. It is in terms of these elements that school-plant values must be determined. The school plant has little value when it fails to meet service requirements.

The Cost Value

The cost value of the school plant or its various elements is basic to all other valuation considerations. Accounting must show in complete detail this value. All other values are related directly, or indirectly, to cost. Cost can be determined accurately, and should comprise all payments, including materials, labor, placement, transportation, engineering, and such expenditures providing for bond issues, and legal fees, made in obtaining the funds necessary for purchase and making the property fit for its service use.

Changes in Cost Values

Original cost values are modified on the books or records from time to time, by expenditures for capital outlays. Parts of the plant will require renewal or replacement, as for example, the installation of a new boiler or the replacement of furniture and equipment. These alterations and replacements may increase the value of the property. It is not always an easy task to differentiate in the accounting between maintenance and capital outlays. The dividing line must frequently be made arbitrarily and should be consistently followed once a policy is established.

The following practice is recommended as a procedure to differentiate between expenditures for maintenance and capital outlays. Assume the old boiler, referred to above, cost \$1,000 and was replaced by one costing \$1,500. The additional expenditure of \$500 would be charged to capital outlay, while the \$1,000 becomes a maintenance-replacement charge.

Factors Affecting Plant Values

School-plant values are not alone affected by the modifications due to replacements or capital expenditures but are subject to hazards and risks. The nature of these risks depend largely on the kind, use, and location of the property. These risks may be summarized under those of: depreciation, obsolescence, inadequacy, and such risks arising from fires, chance destruction, and accidents.

These hazards must be considered by those responsible for school property. They must be anticipated and avoided insofar as is humanly possible. Property accounting can be very serviceable in providing many of the essential facts requisite to planning the necessary measures to meet these risks.

Depreciation

All the elements of a school plant do not remain in service for the same period. This is at once apparent if the useful life of a motor bus is contrasted with a teacher's desk. The useful service life of these properties will vary irrespective of use and maintenance. Even though property is efficiently and satisfactorily cared for it will still decrease in value. This decrease in value where property is maintained and operated effectively and efficiently is called normal depreciation. Normal depreciation can be anticipated and accounted for within certain limits of accuracy, depending largely on accounting and statistical facts available. In the study of the depreciation of school buildings in New York State,¹⁹ it was found that the annual depreciation in city school buildings in that state approximated two per cent, while the depreciation of buildings in rural districts more nearly approximated three per cent. It should

¹⁵Elements of School Finance—Pittinger, Houghton Mifflin Co.

¹⁶School Bonds—Fowlkes, J. G. Bruce Publishing Co.

¹⁷The Balance Sheet in Public School Reports—Fred Engelhardt, School Board Journal, August, 1925.

¹⁹Financing of Education in New York State, page 85, Strayer & Haig, Macmillan Co.

be observed that these figures were determined on the basis of the present life of these properties and the conditions resulting from the existing maintenance policies pursued. This investigation, no doubt, includes many buildings which, measured on the basis of their service value, would require abandonment and replacement. The depreciation estimates in this study probably do not represent normal depreciation, but rather a general depreciation resulting from a great variety of maintenance policies, or in fact, no policy of maintenance in many localities.

The yearly depreciation in value of a school building is illustrated in diagram No. 1. In the diagram it was assumed that the building cost \$105,000, that the salvage value was \$5,000, and the life of the building was fifty years.

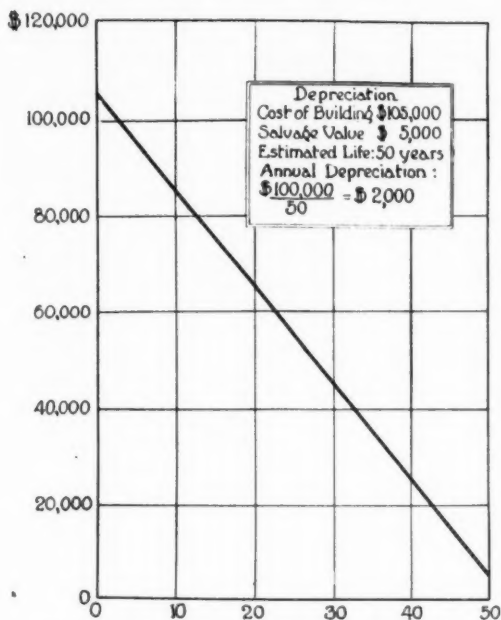


DIAGRAM 1. YEARLY DEPRECIATION OF A SCHOOL BUILDING.

Depreciation

The depreciation rate of other elements of the school plant depends largely on the nature of the property, their use, and maintenance. The following examples are illustrative of the variations in the rate of depreciation of certain articles:

Item	Estimated annual depreciation per cent of full value
Automobile	22
Heating plant	10
Furniture and fixtures	6
Library books	10

Accounting for Depreciation

The normal depreciation of a piece of property varies with time and its value when ready for discard. The purposes of accounting for depreciation in a private enterprise vary somewhat from that of a public enterprise. These variances are largely due to the essential requirements in private enterprise, that is, to keep capital intact, and to permanently maintain the original values. This is essential when one considers the nature of the enterprise. The plant in public-school administration has the one major purpose, viz., efficient, continued service. The purpose of accounting for depreciation is to provide the necessary facts to school management as will point out possible means of improving this service, and reduce to a minimum the "current" and "long-time" cost of the plant. To carry out these principles in public-school management, property values must be preserved.

It has been pointed out that the rate of depreciation depends on the kind of property under consideration, its use and maintenance. For this reason it is necessary to account for the depreciation of the various elements of the school plant. There are a number of ways in which this is done in private business. Some provide a reserve for depreciation and maintenance to which all charges for maintenance and replacements are made. Others provide a

reserve out of income for normal depreciation only. It seems highly desirable that these two factors be separated in accounting. By doing this, normal depreciation can be more accurately estimated and the maintenance policies and program adequately checked.

TABLE III
Depreciated Value of School Buildings

School	Year of Construction	Total Cost	Estimated depreciated Value 1920 Rate 2 per cent
1	1897	\$ 73,692	\$ 29,794
2	1899	45,332	26,293
3	1900	113,000	67,800
4	1898	93,385	52,296
5	1896	61,000	30,500
6	1899	91,666	53,166
7	1911	88,993	72,974
8	1919	3,173	3,110
9	1897	59,618	32,194
10	1900	44,442	26,665
11	1915	16,079	15,571
12	1910	260,000	208,000
Total		\$950,380	\$627,263

It is questionable whether the practice of establishing an actual cash reserve for depreciation is desirable in public-school business. The experience of the American public with sinking funds for bond issues no doubt helps to discourage such a practice. The many problems included in the administration of a reserve fund hardly warrant the advisability of providing for depreciation in this manner for the majority of school districts.

An accounting reserve for depreciation, however, is not only desirable, but essential, to the economic and efficient operation and maintenance of a school plant. Available rates must be used until school accounting can establish more accurate estimates for plant depreciation. The following tabulation was made to illustrate the changes in valuation due to normal depreciation.

TABLE IV
Salvage Value of Certain Abandoned School Property, Philadelphia, Pennsylvania

Location of property	Date of Construction	Cost of building	Cost of site	Date of sale	Amount of sale
Gilbert	1870	\$19,420	\$ 3,000	1924	\$ 21,264
Gilbert Annex	1906	15,000 ¹	.....	1924	29,176
12th Street	1827	28,265	6,500	1925	149,490
Herbert	1873	28,490	6,000	1925	125,235
Howard Street	1867	.....	21,200	1925	11,967 ²

¹Building and site purchased together.

²Building torn down prior to sale.

These data were derived from applying a two per cent annual depreciation rate to a group of school buildings in one city.²⁰ The depreciation estimates are made as of 1920.

Obsolescence

Property not only depreciates but may become obsolete. Obsolescence is not depreciation. A textbook may be superseded by a new edition, and yet it may have depreciated but little. Various equipment may become suddenly obsolete through invention or the adoption of better methods or techniques of instruction. Obsolescence cannot be readily anticipated. In spite of this, management must be prepared to meet the conditions resulting from obsolescence when they arise in order that the financial emergency be minimized. The current program and the anticipated financial plans should not be unnecessarily interfered with by the failure to anticipate these things.

Inadequacy

Inadequacy is not depreciation. A school building may become completely inadequate with the sudden growth of a community. The reorganization of a school system may reveal many school buildings poorly adapted for the needs of the new organization. Flexibility in construction, designs permitting ready expansion, anticipating by advanced planning both site and building needs, planning interior of buildings, are among the factors that may reduce inadequacies. It is well to remember that the most important factor concerned with inadequacy is anticipation through intelligent planning. School systems that anticipate future

²⁰Superior Survey. Board of Education, Superior, Wis.

needs will rarely be faced with sudden burdens due to inadequacy.

Salvage Value of the School Plant

It has already been pointed out that in the administration of school property many economies are possible where reuse is contemplated and where, through the proper repair department, parts are salvaged and remade into usable property. It is important that a detailed accounting analysis of the work of such a department be available. Such salvage must be justified, the renovated property must be revalued and accounted for on reuse.

In determining the rate of depreciation the salvage value of property is necessary. In estimating this rate in advance the salvage value must likewise be estimated in advance, and where facts are available more satisfactory estimates can, of course, be made. It is questionable whether it is worth while in accounting for depreciation of items of small value, to consider the salvage. In the case of buildings it should be done. Yet this is frequently difficult unless accounting for sites and buildings are kept separate.

In accounting for the depreciation or appreciation of land it is usually assumed that land values do not change in the same sense as property. It is pointed out by Strayer and Haig²¹ "that contrary to the general impression insofar as school sites are concerned, there is but a slight increase in the value of the land when taken over a long period." The following table illustrates the salvage value of several items of school property in Philadelphia. The appreciation of value in these cases is due to the increased valuation of land.

In estimating the salvage value of property in advance in order to determine the rate of de-

preciation requires accurate accounting records of similar cases, if the salvage value is to be at all consistent with actual conditions.

(To be Concluded in September)

²¹Financing Education in New York State, page 80, Strayer and Haig.

LIFE'S LESSONS

Dear little lad, with his face all a-frown,
Tired as tired can be;
Puzzled with lessons so tedious to learn,
Leans up against Father's knee.
"Daddy!" he pleads, "won't you help me with this?"
That brain of mine's getting numb;
'Rithmetic seems the worst bother there is;
Somehow, I can't do that sum!"
Father looks down at the figures all wrong;
Smiles, thinking back o'er the years;
(Schoolbooks give way to the problems of life;
Problems the wisest man fears);
Shows the wee lad where to find his mistake;
Soon the hard lesson is done.
Reaching his goal of one hundred per cent
Lad votes arithmetic "fun!"
Father says: "Life's an arithmetic class;
All of us, Lad, are in school,
Studying many a lesson each day,
Under our Teacher's wise rule.
Adding a little of courage and cheer;
Subtracting the evil and pain;
Learning to multiply kind thoughts and deeds;
Dividing the blessings we gain."
"But, Father, is ever a lesson so hard,
That even You can't understand?"
"Yes, Lad, there are some that are never worked out
Except by the Teacher's own hand.
But just like yourself, we must work with a will,
And aim for the head of the class.
Some day we will hear the approval "Well done!"
And into a higher grade pass."

—Anna McNeil.

State School-Building Aid Programs

Robert D. Baldwin, Central Normal School, Stevens Point, Wis.

The high cost of providing buildings adequate to the needs of modern education is causing many communities, both urban and rural, to lie awake nights, financially speaking. In large urban centers, where wealth tends to concentrate and where school affairs are less directly managed by the people of a community, this condition is perhaps less conspicuous than in small towns and the open country, where school affairs are rather directly managed and where wealth is likely to be somewhat less. The fact that a smaller proportion of urban dwellers pays taxes directly may also reduce the hesitancy in cities to embark on a school-building program. Whatever the causes, the fact remains that people in small towns and in the open country are slower to undertake the financial burden of school-building construction. As a consequence, many of our progressive states have developed programs of state aid for rural and consolidated school buildings, with the purposes in mind of stimulating communities to provide adequate buildings for school purposes, and of aiding them in the undertaking.

State Provisions for Building Programs

This study attempts to present the provisions of such states as have adopted building-aid programs, and to evaluate the effects of these programs in stimulating communities to building activity and in equalizing the burdens of building costs.

A. Provisions

Alabama. State appropriation of \$134,000 annually, \$2,000 to each county for erection, repair, and equipment of rural schoolhouses. Also \$87,500 annually, 1919-1923, and any unexpended balances remaining to the credit of the counties minus a sum held back by the state superintendent to hire experts on schoolhouse construction, inspectors, etc., to be apportioned equally among counties. (Law of 1923, pp. 128-9.) These apportionments are disbursed upon application to the county board. Application must be accompanied by: (1) donation locally of at least twice amount applied for; (2) guarantee of separate toilets; (3) deed in fee simple to State of Alabama to two acres if application concerns a two-room building, and five acres if a three- or more-room building. Grants shall be made as follows: (4) not more than \$450, \$900, \$1,300, \$1,800, \$2,300 for one, two, three, four, five, or more rooms, respectively; (5) not more than \$500 nor less than \$50 for repairs and equipment. In granting aid, "rooms" shall not include auditorium, or workroom, but additional aid may be given, above the grants in clause 4, of \$500 for auditorium, and \$400 for one workroom. (p. 63.)

Delaware. For school buildings the state board may pay such part of the cost as it sees best, but the local board must file its building program with its biennial budget. (Law of 1923, p. 42.)

Minnesota. For buildings in consolidated districts, 40 per cent of the cost, but not to exceed \$6,000 to any district for each such building. (Law of 1923, Sec. 223, 2.)

Missouri. The state will pay one fourth of the cost of a consolidated building up to \$2,000, provided it has a site of five acres and a satisfactory school building. (Law of 1923, Sec. 11263.)

Nevada. The state superintendent is to deduct from money to the credit of each district from apportionments received from state and county funds, all in excess of \$350 per apportionment teacher, and to place these in the county reversion fund (but if trustees of the district can convince him that this excess or a part of it, is needed for buildings, repairs, or



maintenance, then he shall not deduct any of the excess, or such part of it. (Law of 1925, Sec. 151½.)

New York. For a central rural school there shall be a building quota from the state, in amount one fourth of the sum actually expended for erection, enlarging, remodeling of a school building in its district, if commissioner approves plans; but this quota is available only if expenditures of the district, exclusive of public moneys, exceed a five-mill levy. (Law of 1925, Ch. 673, Sec. 2.)

North Carolina. The law permits three schemes of financing the building program: (1) local funds entirely; (2) fund provided equally by local district and county as a unit; (3) fund furnished entirely by county unit. The last of these is the plan favored by the state department. The state's part in this program consists in two loan funds, aggregating about \$16,500,000, from which loans are made at low interest rates, from money obtained partly (\$15,000,000) from the proceeds of sale of state bonds, for the erection of schoolhouses in rural territory in the various counties. (Letter from State Supt. A. T. Allen.)

Oklahoma. In a consolidated district state aid is given for building, not to exceed one half the cost, and not over \$2,500, and in a union graded district not over \$1,250. A consolidated district must have three teachers, attendance of 130, and at least a three-room building; union graded district, two teachers at the central building, attendance of 40, and at least a two-room building. In districts of both types the area included must be not less than 25 square miles, and the assessed valuation not less than \$200,000. (Law of 1923, p. 36ff.)

South Carolina. The state will match each \$100 raised locally for building purposes with \$50 state aid. But no one school shall receive more than one fourth of the cost of completed, equipped building, nor more than \$400, \$600, \$800, or \$1,000 for a one-, two-, three-, or four- or more-room building, respectively. A second allotment on this basis may be made at the discretion of the state board. An additional bonus of \$50 may be granted in case two or more schools are consolidated (Sec. 2632). In no case shall the amount of state aid exceed the amount of extra county aid. The site is to be four acres, unless such is not obtainable. (Law of 1924, Sec. 2633.)

Wisconsin. Appropriation of not over \$10,000 annually to help in the erection and equipment of consolidated buildings: one half the cost, but not to exceed \$1,000, \$1,500, \$2,000, and \$3,000 for schools of one, two, three, and four departments, respectively, in consolidated districts formed by uniting schools of three or more districts; and not to exceed \$5,000 for a graded and high school in a consolidated district uniting all districts of a township. It is provided that plans and estimates must be approved by the state superintendent, and reports regu-

larly made to him by the clerk. (Law of 1923, Secs. 20.26 (1) and 40.15 (6) and (7).)

Special Building Aid Stimulates Consolidation

In five of the states granting special building aid, it is an adjunct of consolidation. As such it is probably thought of chiefly as a stimulus to that end. From this standpoint it may be significant that only these five states¹ guarantee to shoulder certain specified proportions of the building cost, and in all cases, except New York, they place definite limits on the amounts. New York's other stimuli to consolidate are quite strong, much stronger than in any of these other four states. In placing no limit upon the amount, New York also in this instance proves itself to be in earnest in the matter of consolidation.

Data are not yet available on the New York situation, because the consolidations are now only in process of formation. Approval of such building operations as may attend the consummation of the move in the several districts has not yet been made.

If we use Missouri as an example of the type where building aid is tied up with consolidation, we find that the consolidation must erect a central high-school building on a site of five acres, the building to contain one large assembly room and modern heating and ventilating systems. The state will pay one fourth of the cost up to \$2,000.²

In 1923-24, out of 226 consolidations having high schools, there were 189 reported with building costs. Presumably these buildings are the central high-school buildings. They range in cost from \$800 to \$50,000, with an average cost of \$16,612. It is scarcely believable that any high-school building of the specifications set forth above could be erected for \$800. Hence, it is reasonable to suppose that the district with that building cost did not qualify for state aid. No data are available as to the districts that have so qualified, but it is reasonably safe to assume that those with about average cost have done so. We shall, therefore, use several districts with building costs of \$16,000 to discover what may be the equalizing effects of this building aid. It will be assumed that each district has bonded itself for the excess of the cost of the building over the state's share and is amortizing five per cent of the bonds annually. Interest is ignored in all cases.

TABLE I

District	Assessed Valuation*	Yearly Bond Amortization Payment	Mill Rate
Irondale	\$ 335,500	\$700	2.08
Gilliam	1,700,000	700	.41
Shelby	1,079,000	700	.65
Shawnee Mound.....	394,000	700	1.79
Van Buren.....	400,000	700	1.75

*Not equalized.

It is clear that burdens of building costs are not equalized. Nor would the equalization be any more effective, were the \$2,000 limit placed on the state's share removed. The burdens for all the districts would be halved. Thus, the difference in rates would be reduced, but the proportion of one rate to the other would remain unchanged. The same would be true if the state's share were one half or three fourths instead of one fourth.

Building Aid as a Stimulus to Building Activities

As to the stimulating effect of this aid in getting communities to build and build well, figures were given on the preceding page showing that only 189 of the 226 consolidated districts maintaining high schools were reported as having buildings. If we set the lower limit to the

¹Minnesota, Missouri, New York, Oklahoma, and Wisconsin.

²Law of 1923, Sec. 11263.

amount which would represent a building such as the state apparently had in mind in granting one fourth of the cost up to \$2,000, at \$8,000, only 140 out of the 189 that report buildings come up to such a standard. However, 129 do go beyond that point. This means that they are bearing *all* of the cost beyond \$8,000.³ How much of this extra effort put forth by communities, in the erection of more adequate buildings, is due to state aid cannot be stated with confidence, but it is probably safe to say that special state aid for buildings did have some stimulating effect.

Alabama may be taken as representative of the type where the state matches one half the amount that communities raise up to certain sums for certain types and sizes of rooms and buildings. Details were given above, but Tables II and III reveal most of the important facts relative to the plan. It must be remembered that the state appropriation is \$221,500 annually, plus any unexpended balances in the state treasury, from which is subtracted the cost of drawing plans, making specifications, and inspecting. This was \$9,114 in 1924.⁴ The balance is distributed to the counties equally, but, if the amounts are not used by August 31 each year, they revert to the state for use in meeting applications from counties which have need for more aid for that same year.⁵ That the stimulus to erect, repair, and equip buildings is stronger in some counties than in others is shown by the fact that 40 of the 67 counties forfeited portions of their quotas, while the remaining 27 went beyond what would ordinarily have been their share.⁶

TABLE II—Building Progress for Year 1923-1924

	No. New Buildings	State Aid	Local Funds to Match State Aid	Local and State Funds	Estimated Cost Buildings
New buildings.....	124	\$183,573	\$367,146	\$550,729	\$917,865
Buildings repaired.....	98	34,158	68,316	102,474	136,632
Buildings equipped.....	192	33,831	67,662	101,493	135,324
Total.....	414	\$251,562	\$503,124	\$754,696	\$1,189,821

The Type of Building and Amount of State Aid

The type of buildings, the number of rooms each carries, the material used in their construction, and the amount of state aid for the different size buildings are shown in Table III. The following comment appears in the 1924 Report⁷ in connection with the facts disclosed in Table III: "It is gratifying to note, * * *, that a larger and more substantial-type building than ever before is being constructed."

The two tables and the quotation just given indicate that there is considerable building activity in rural sections.

TABLE III—Types of Buildings and Amount of State Aid

No. class rooms	No. buildings	No. class rooms	Manual training rooms	Domestic science rooms	Auditoriums	No. brick, stone or available per building	State aid type building
1	15	15	3	..	..	..	\$ 450.00
2	26	52	26	..	..	..	900.00
3	24	72	24	24	..	2	1,300.00
4	22	88	10	11	5	2	1,800.00
5	5	25	3	3	4	..	2,300.00
6	15	90	11	10	12	3	2,750.00
7	1	7	1	1	1	1	3,200.00
8 or more	5	45	5	5	4	5	3,650.00
Vocational buildings	8	24	8	3	..	..	.....
Teachers' homes	3	15	..	..	..	..	.....
Total.....	124	433	91	57	26	13	

*Alabama Report for 1924. Table adapted from page 22.

The report for the preceding year reveals the same general situation.⁸ However, more aid was granted in 1922-23 than in 1923-24, by about \$3,000. There was a falling off in the number of schools and in the number of classrooms in the latter year, but an increase in domestic-science and manual-training rooms, and in auditoriums.

Evolution in a Building-Aid Plan

Alabama gives a good illustration of evolution in a building-aid plan. In the 1918 report we find the following statement, which is explained more or less by Table V: "It has been a diffi-

cult task to readjust from the old law, where state aid was given without any supervision, to the present law whereby the state undertakes to see that the money is wisely used."⁹

TABLE IV—State-Aid in Alabama*

Year	State aid available	State aid consumed	Buildings erected	No. rooms (estimated)	Cost (estimated)
1916	\$238,527	\$112,000	86	172	\$ 51,082
1917	320,543	51,093	92	276	154,373
1918	403,450	79,427	115	345	167,341
1919	459,588	170,083	173	519	610,000
1920	216,725	145,629	115	450	464,660
1921	302,058	266,490	167	668	1,106,120
1922	285,789	260,709	150	548	1,220,250

*Data from Report of 1922, page 14.

A glance at the figures for 1916 will show what the report means by the statement that state aid was given without supervision. In that year \$112,000 of state aid was consumed on rooms which are estimated to have cost \$51,082. Naturally the adjustment was difficult. But from 1919 on, the state's share is quite consistently one third of the total cost that the law intends it should be, or less. It is interesting to note that the total estimated cost of buildings in 1921-22 exceeded four times the amount of state aid consumed. Previous figures cited in the discussion show that this was true also in 1923-24. This makes it appear that, when building programs become popular, local districts do not stop with meeting requirements for state aid, but exceed them. This is doubtless true. One would not be justified in claiming that this impetus to building from 1921 to 1924 is due to the cumulative effects of state stimulation through building aid. Too many factors may have contributed. There was, for example, the necessity of catching up with normal construction which had been curtailed during the war,

thus throwing abnormally heavy burdens on post-war building activities. However, it is entirely probable that state-building aid, especially under the supervision given by the state, did stimulate many communities to provide more adequate facilities than they would otherwise have provided.

The North Carolina State-Aid Plan

North Carolina will be taken up in this discussion of state aid for buildings because of the totally different way in which it endeavors to stimulate localities to building activity, as well as to assist them in financing building

"The law permits all three of these schemes. We favor as strongly as possible the county-unit idea, requiring the county as a whole to build the schoolhouses where they should be built."

The state, then, has worked its program of building aid into the above scheme.

Beginning in 1903, North Carolina has used the "literary fund," at that time amounting to \$200,000 as a revolving loan fund for the purpose of "securing a comfortable schoolhouse in every rural-school district."¹⁰ Loans were made for ten-year periods with interest at four per cent. One tenth of the principal and interest on the unpaid balance were payable annually by the county that borrowed from the fund. The amount loaned from 1903 to June 30, 1924, was \$2,849,525. This had been invested in 2,815 schoolhouses, worth \$10,055,801. Meantime the fund had grown, by reason of earnings, appropriations by the legislature, and sales of swamp lands, to \$1,200,575.

Apparently this plan of stimulating and assisting in the matter of school buildings by furnishing money at low-interest rates was highly regarded, for in 1921 the legislature approved \$5,000,000 of state bonds to be used for the same purpose. In 1923 it approved another block of state bonds of the same amount for the same purpose. In 1926, still another \$5,000,000 became available. These special building funds are loaned to districts and counties on an interest basis of four and one-half per cent, one twentieth of the loan and interest on the balance to be repaid annually over a period of 20 years. The buildings to be erected with the first two loan funds are to contain five or more rooms. Buildings erected with the proceeds of the last fund must contain seven or more classrooms.¹¹

It should be stated that the consolidation movement was already under way before 1920. In one sense these special building funds were provided in response to the demand for a means of financing the erection of the necessary buildings to house consolidations. The method employed to assist in the financing, that of lending the money at low interest rates and over a long period of years was an outgrowth of the earlier experience with the "literary fund."

The number of buildings of more than five rooms erected in rural territory from 1920 to 1924 is shown in Table V.¹²

On the basis of Table V, it would probably not be fair to say that the funds account for this rather remarkable show of rural progress in better buildings. But, it is probably fair to say, that all of this progress might not have occurred without the low-interest, long-term

TABLE V—School Buildings Erected in North Carolina, 1920-1924

	No. buildings	Cost	No. classrooms	Av. cost per classroom	Av. cost per building
White	518	\$18,413,840	4,806	\$3,831	\$35,546
Colored	35	411,264	236	1,742	11,750
Total.....	553	\$18,825,104	5,042	\$3,732	\$34,041

projects. The methods of financing the building program permitted by law, irrespective of state aid, are described by Supt. A. T. Allen as follows:

"1. The local district by a bond issue votes itself sufficient funds to erect the buildings at its own expense.

"2. In some of the counties the county as a unit pays for one half of the building and requires the district to pay the other half.

"3. In some counties the entire cost of the building program is assumed by the county.

⁹Report of 1918, p. 47.

¹⁰Ibid.

¹¹Report of 1924, p. 23.

¹²Report of 1924, p. 25.

¹³Ibid. pp. 26-27.

¹⁴Ibid. p. 22.

¹⁵Report of 1923, pp. 24-25.

¹⁶State School Facts—Published semi-monthly by the State Superintendent at Raleigh, N. C. Issue of June 15, 1925.

¹⁷Personal letter from Supt. A. T. Allen.

¹⁸State School Facts; issue of March 1, 1924.

¹⁹Ibid. Issue of Feb. 15, 1925.

Value of Rural School Property	
1921-22	\$17,753,225
1922-23	24,694,105
1923-24	28,900,165

A clearer idea of the significance of these figures may be had from the following:

"It is more difficult to secure building money in North Carolina than any other kind of school money. The county commissioners have the power to levy an unlimited rate for building, but it is very difficult to get them to levy."¹⁴

Of course, one is not justified in saying that all this progress in school building is the direct result of the special loan funds. It is only one of many factors. At the same time, it does raise the question whether the state's plan of furnishing easy credit for building purposes isn't as effective a type of stimulation and assistance as can be employed. Financing the erection of a building is usually a long-time bonding proposition anyway, and we well know the appeal of easy credit and term payments in almost any field where commodities are to be purchased. The chief danger of easy credit is overstimulation and overexpansion in the particular field concerned. This may be a danger in the North Carolina school-building situation. However, the loans are carefully made, and constitute a prior lien on the property of the communities or counties concerned. We should like to see more experimenting with this plan of building aid under quite different circumstances.

No data are available as to the plan's equalizing effects. However, reference may here be made to the Missouri situation, which, after the \$2,000 state aid has been deducted, represents virtually a parallel case. The conclusion would be the same here as there—that equalization is not notably effective.

Summary

In conclusion we may say that, of the three plans of granting building aid discussed, North Carolina's plan of long-time, low-interest loans has been accompanied by the greatest amount of building construction. No one of the three plans has much to recommend it from the standpoint of equalizing the burden. All of them lessen the burden but fail to equalize between communities of varying wealth. In view of the fact that their effectiveness in equalizing

¹⁴Personal letter from Supt. A. T. Allen.

The Purchase and Distribution of Equipment and Supplies

The Practice in Detroit¹

L. H. Rich, Assistant Director of Educational Expenditures

The purpose of presenting this subject is to report accomplishment in the solution of the problem of distribution of equipment and supplies in the Detroit public schools. Most of you understand the general method now in use; many of you are familiar with the details. For those engrossed in the large problem of conducting a school, the significance of the development over a period of years of a system of material distribution may well pass unnoticed. Explanation of the origin of the problem with which we are dealing, and explanation of the methods of solution therefore may be not only of interest but also of practical benefit.

Factors in the Situation

The main factors which have made the problem so complicated are: (1) The broadening of the curriculum in the elementary schools; (2) the development of secondary and higher education; (3) the growth of the school district both in numbers and area.

Compensating factors, however, should not be overlooked. Specialization, the organization

facilities in buildings depends on the extent to which they stimulate all communities equally, we can give no adequate answer on this point.

In the matter of capital outlay for buildings, the study has disclosed no state which specifically engages to equalize cost burden as between one community and another. The state pays a share, limited or unlimited, but with no equalization adjustment which is positive. New York has a negative adjustment, by ruling out from state-building aid such communities as fail to levy locally five mills for current expenses. In view of the fact that adequate facilities in the way of buildings and grounds and sanitary arrangements are important factors conditioning the educative process, it may be questioned whether the state is justified in neglecting to equalize these facilities and the burdens which communities must bear in providing them.

A possible method of handling the matter of equalization in building aid in a manner parallel to other arrangements for financing schools in North Carolina may be here proposed. At present the state assumes that portion of the burden for teachers' salaries for a six months' term which cannot be realized by a levy of 4.4 mills on the county valuation. The same sort of plan could well be used for financing capital outlay for buildings. Under the loan plan now in use for aiding in building construction, each community that has availed itself of this aid, makes annually a payment of one twentieth of the principal of the loan plus interest. The state, of course, must approve both the use and the amount of the loan. The state may agree to supply all amounts needed to meet these payments in excess of the proceeds of a levy of, say three mills on the county's valuation, with the provision that the county also levy not less than 4.4 mills for the year for teachers' salaries for a six months' term.

The same plan may be applied where the state loans the money to communities or counties, or where bonds were floated locally. In the latter case, the excess would be paid to the community or county treasurer, and by him to the banking firm holding the bonds, instead of merely being credited by the state treasurer to the payments due on account of building loans of the community or county concerned.

of departmentalized work and, finally, the development of the platoon system, have aided materially in simplifying the problem by making standardization possible.

Furnishing material was a simple matter when only "the three R's" were taught. Desks, a few books, a blackboard, chalk, and a slate comprised nearly everything needed to conduct a school efficiently, according to the standards of that time. Contrast these with the great variety of materials now supplied. From collar buttons to expensive machinery, we run the whole range. The Detroit Board-of-Education Supply Department now carries in stock approximately 4,000 kinds of articles which are used generally. Nearly as many articles are purchased for direct delivery to schools, which for various reasons it is not deemed advisable to carry in stock.

Special equipment and supplies are now necessary for libraries, physics, chemistry, and biology laboratories, shops, commercial departments, specialized technical work of many kinds, auditoriums, music, health, etc.

The volume of material to be handled is large, and the distance to carry it is great. The

supply department is in many respects a duplicate of any large wholesale house in the city. Some idea of volume and variety of material may be had from considering the amount expended last year for a few classes of materials: Drugs and medicines, \$2,100; bread, cakes, and crackers, \$4,200; pens, pencils, and inks, \$12,700; chalk and crayons, \$15,600; acids and chemicals, \$14,000; lumber for manual training, \$40,000; stationery and paper supplies, \$130,000; food products for domestic science, \$13,300; animal foods—not for human consumption, \$2,000. Supplanting one horse and wagon used up to 1920 there are now three auto trucks, and a truck's capacity is five times that of a wagon. The round-trip time from the supply department to the most outlying district is eight hours.

Detroit's Scheme of Distribution

The situation outlined above has developed in every large city, but so far as we have been able to discover, other cities have not yet solved the problem. Many are still attempting to furnish whatever is requested at any time. In some cases, to retain control over funds, each building is allotted an amount of money in the budget, which may be spent largely as the principal desires. Cleveland, to overcome difficulties attendant under this scheme, requires a separate requisition for every item from stock. You can easily visualize what that system would necessitate in Detroit in labor of writing and handling the enormous number of requisitions. Rochester allots each teacher an amount of material for her use for the year and delivers it direct to her room. At the close of the school year, everything remaining in each room is brought back to the supply department. The cost of labor to do this in Detroit would be prohibitive, even if it were desirable, which we doubt.

Detroit has developed a method of distribution which is unique in school systems but is merely an adaptation of modern big-business methods. Our production schedule, if you please, for the year is determined by the various courses of study. To carry out this schedule the unit needs are determined in advance by the department of supervision, as in a manufacturing plant they are estimated by the engineering department. These needs are submitted to the principals in the form of standard lists from which requisitions are written in accordance with the allotment designated for each item, less the amount of inventory. These various notices to requisition state classes of material are scattered throughout the year on a regular schedule which is timed with a schedule of purchase and delivery. This schedule we expect to be able to put completely into effect next year.

Dates of Purchases

For instance, in December requisitions will be requested for the following classes of material: Science, library, vocational replacements. Purchase is scheduled for January and delivery within sixty days. Wherever possible the purchase schedule is considerably in advance of the requisition schedule, so that delivery may be made the month following the receipt of requisitions.

In the purchase and distribution of furniture, it has been found advisable to purchase only twice each year—May and November. This means that requests must be in by March and September. This allows for quantity purchases and low cost. Further, all furniture has to be purchased for direct delivery to schools as the board of education has no warehousing facilities for this type of articles.

All furniture for new buildings is scheduled directly by the equipment department with the aid of the district principal governing the district in which the building is located. When a

¹Paper prepared for the Ninth Annual Education Conference, Detroit, May 12, 1927.

principal is assigned, a tabulation of equipment scheduled for the building is furnished in order that the principal may know what will be delivered. All deliveries of equipment for new buildings must be scheduled in accordance with the completion dates of the building contracts.

Difficulty in putting the schedule into effect has been encountered by lack of funds to make advance purchases. Evidence of this is shown

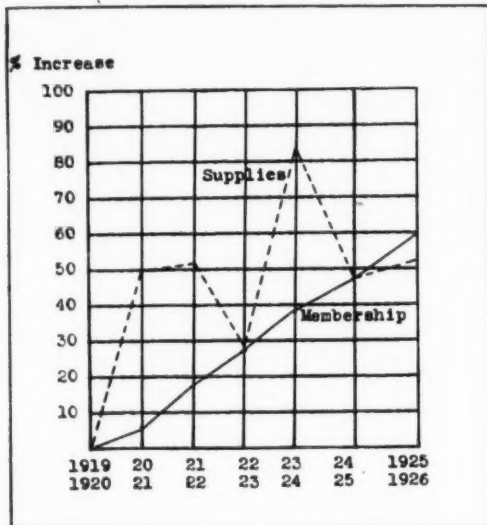


FIG. 1.

in Figure 1. During the year 1923-24 the increase in membership was 38 per cent over 1919-20, while the increase in expenditures for supplies was 85 per cent over that for 1919-20. For many large classes of material two years' supply was purchased in one year. Since 1923-24 the per cent of increase has been practically parallel and should continue that way.

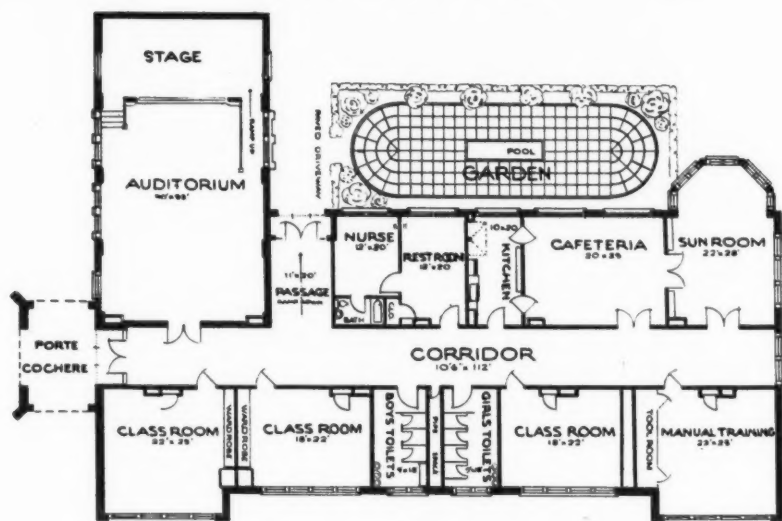
Advantages of Plan

Some advantages of the system in use in Detroit are outstanding:

1. It is elastic. The standard lists are revised each year to conform with changes in the curriculum and improvements in instructional material.
2. Labor in making and filling requisitions is reduced to a minimum. An intelligent clerk in the schools, by following directions, should have no difficulty in determining what and how much to requisition. A clerk in the central office can easily and rapidly check requisitions for codes and quantities. Items for each class of material are arranged alphabetically. The same order is followed on the requisition, and the bins at the supply department are arranged in this order. The man filling the requisition for any school starts with a tote truck at the bin containing the first item and continues down the line until the last article on the requisition is placed in the truck. The material in the truck is then rechecked as it is put into baskets for delivery to the school. In cases where an article is used in more than one division, it is placed in a bin most accessible relative to its use. The purchasing agent is now proceeding in connection with this rearrangement of bins to label and number each bin and to make a reference book for the use of men at the supply department wherein each item carried in stock will be identified by bin number and a cut or other description. Anyone not familiar with the stock can then readily find any one of the 4,000 items. Errors will thereby be reduced to a minimum.
3. The system allows, insofar as it is humanly possible, for no partiality to be shown either as respects schools or departments within schools. Since each requisition carries the designation of use within the building, errors in distribution by department are readily traced.



SCHOOL FOR CRIPPLED CHILDREN, OKLAHOMA CITY, OKLA.
Layton, Hicks & Forsyth, Architects.



FIRST FLOOR PLAN

SCHOOL FOR CRIPPLED CHILDREN, OKLAHOMA CITY, OKLA.

Outstanding Economies

4. Saving by standardization is appreciable. One kind of writing pencil is now supplied where formerly 43 different kinds were carried; 2 kinds of pens have replaced 27; 2 types of pen-holders are used instead of 8.
5. Peak loads of delivery or receiving are now eliminated. The schedule of requisition, purchase, and delivery scatters the work of everyone having to do with material throughout the year.
6. Minimum space for stock is required on account of rapid turnover.
7. Schools are supplied with each class of material supposedly in advance of the need.
8. Budget appropriations for material are allowed more nearly as needed because the appropriating bodies can be shown that requests are based on actual needs rather than estimates.

In conclusion I wish to remind you that whatever merit this system possesses and the degree of efficiency with which it is working is due largely to the cooperation of supervisors and principals with the purchasing agent, the equipment engineer, and the department of educational expenditures. None who are thus responsible claim it is perfect. But we do believe Detroit has in general a more economical and efficient system of material distribution than any other large city in the country.

THE BRYAN SCHOOL FOR CRIPPLED CHILDREN IN OKLAHOMA CITY Cora Miley

The new William J. Bryan School for Crippled Children was occupied in January, 1927. It was named for the great commoner, William J. Bryan, and enrolls 49 children at the present time.

A special school for crippled children has been in operation for the last four years. For three years the classes were housed in the Bryant building, but the increasing colored population in the district required the turning over of that building to the colored race. An effort was made to place the children in another grade school but, due to some peculiar reason, the patrons objected so violently that the idea was abandoned. Other buildings were considered, but the patrons also objected with the result that the children were still without a home. Finally, a church offered the use of its basement for the school, and the children were housed there during the winter 1925-1926.

Last spring a fund was set aside for the erection and equipment of a school building adapted to the needs of the crippled children of the city. The building was erected and equipped at a cost of approximately \$50,000. It has four classrooms, an auditorium, a manual-training room, a gymnasium, a cafeteria, and a sun parlor. The floors are rubber covered to prevent slipping. There are hand railings to aid wavering, tottering feet. The gymnasium is equipped with corrective apparatus and is presided over

(Concluded on Page 150)

The Organization of Special Classes in a Small School System

Supt. John S. Page, Howell, Mich.

If we stop to consider the fact that ten per cent of the more than \$400,000,000 annually expended in the United States for school instruction is devoted to reteaching children what they have already been taught but have failed to learn, the need for a better plan of instruction and of organization, based upon a definite and scientific plan of classification, becomes apparent at once.

Unless rather serious reflection is given to the actual facts as they exist, the administrator of the school in the smaller community is inclined to think that the establishment of a class or classes for special education is not a practical thing and is not possible. There is a tendency to think that such classes are needed only in the great city systems.

Ask any school psychologist of experience and he will tell you that there are a great many defective children in rural and village schools; children who cannot be assigned to special classes or institutions, but who are for that reason all the more in need of special educational consideration. M. P. E. Groszmann says in his book on "The Exceptional Child" that clinical researches, educational, psychological, medical, and sociological, have established, with some degree of accuracy, the educational problem of the individual child.

"Parents, teachers, and educational workers generally must be so trained that they appreciate these individual problems and deal with them intelligently. They must learn to recognize ordinary and typical differences as well as danger signals in cases of impending disease or derailment, physical, mental, or moral.

"We must put our courses of instruction and methods of presentation and training, our grading and grouping, our promotions and graduations upon a strictly scientific basis, meeting the individual variation at every point so as to achieve the highest efficiency of each."

Our school organization must be so constructed that typical differences may be met by special provisions.

It is the duty of the school authorities in any community to understand and interpret the deficient child. We cannot afford to neglect the mentally or physically deficient child wherever he may be found. We must bring about reasonable changes in his school program and in his home life, to make the most of his capacities, and to safeguard him so far as possible.

Finding the Children

How can a small school system go about the task of securing this needed organization? What are the steps in the work of establishing special classes in the smaller school system? One of the first things to be done is to ascertain just what pupils in the school are in need of special training. For the deaf, the crippled child, or the child with defective eyes the regular physical examinations will usually be the only guide needed to aid and supplement the observation and conclusions of the teacher and administrative officer.

Certain plans and devices may be used as aids in selecting the pupils in need of special training and for whom special classes should be formed. However, the teacher's estimate of a child's ability and of his special needs is one of the factors of first importance to be considered and to be made use of. Other means available should also be utilized to verify and supplement the teacher's opinions and estimates. I do not wish to infer that the teacher's estimate is all-sufficient and final, but I do believe a good teacher will have valuable knowledge of each pupil and of his specific needs and weaknesses. As a second aid in discovering others in need of

special work the age-grade census is of great importance. To be of most value the age-grade census should be taken each year, and at about the same time of the year. When the census is completed it will show the number in each grade who are accelerated or retarded, and it will also reveal the degree of acceleration or retardation. The following table shows the form of the tabulation chart for the age-grade census, and presents the distribution of eight hundred pupils who were enrolled in school that day.

AGE-GRADE CENSUS

Report below the number of pupils in your room in each grade of each age. Take the age of the pupil at his last birthday. For example, a child is seven who has reached or passed his seventh birthday, but has not reached his eighth. Take this census on the 1st day of November, 19... Include in the census all pupils belonging on that day.

Grade	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
Age	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1st																		55
2nd																		60
3rd																		49
4th																		67
5th																		48
6th																		59
7th																		53
8th																		48
9th																		94
10th																		84
11th																		65
12th																		53
Total	10	43	54	50	42	52	49	52	42	78	74	77	75	58	21	8	4	800

* Under 5 years

* 21 years and over

The lines are drawn in the distribution to indicate three classes of pupils for each grade.

First, those included in the spaces to the left of the heavy lines are accelerated; are young in years for their grade.

Second, those between the heavy lines may be said to be in the normal grade for their age.

Third, those to the right of the heavy lines are retarded; i. e., are old in years for the grade in which they are working.

We are especially interested in the first and third groups of children as indicated by the census chart. The accelerated pupil and the retarded pupil present special problems. The middle group will probably be cared for in the work of the regular grade and class.

Concerning the pupils shown by the census chart to be retarded. From the chart we can ascertain the number in each grade who are retarded and the degree of retardation or the number of years each is behind his regular grade. Before we can provide the kind of training each of these retarded pupils is in special need of, it is necessary that we know more about his individual needs.

For this purpose the following list of questions will be found useful:

PUPIL QUESTIONNAIRE

1. Name of pupil.....
2. Age..... Grade.....
3. Weight..... Height.....
4. Diseases pupil has had.....
5. Has pupil had any serious illness?.....
What?..... At what age?.....
Duration of illness.....
6. Apparent physical defects.....
7. Results of physical examination:
 1. Are tonsils enlarged?.....
 2. Are adenoids present?.....
 3. Is hearing normal?.....
 4. Condition of eyes.....
8. Number of days pupil has been absent during the past year to date.....
9. Number of times pupil has been tardy during the school year to date.....
10. How many different schools has pupil attended?.....
List them:
 - 1.....
 - 2.....
 - 3.....
11. State length of time pupil has spent in each school grade.....
12. At what age did pupil enter school?.....
13. Is pupil's father living?.....
14. What is father's occupation?.....
15. Is mother living?.....
16. What is her occupation?.....

17. How many children in family?.....
18. What is the usual personal appearance of the pupil?.....
19. Teacher's rating and comments.....
20. Teacher's recommendation for this particular child.....
Teacher.....

The questions are intended to bring out, if possible, facts that will aid in determining the causes of retardation, for if we are to help the child, we must in all probability get a remedy for the particular thing that has caused him to fall behind the normal rate of development and of advancement.

Each teacher should be asked to obtain the necessary information and fill out completely the answers to the questions in the form. It may necessitate a visit to the home of the child, but this is in itself a good thing and one that will help in completing the diagnosis of his case.

To explain briefly the idea of certain questions: Question 4 is included because a pupil may have had measles and missed but a few days of school, or he may have had measles followed by complications and have been compelled to miss months or even a year. Question 10 is important, for frequently a child changing schools is put back a half grade or even a grade and under the best of conditions must meet new and strange situations which may cause him to fail to adjust himself quickly to his new work. The loss of a grade is the result. Question 16 may or may not make a difference, but usually a mother who is regularly employed away from the home does not have the time to give to the children that mothers give who have all their time for home duties. The child may be permitted to remain out on the street until the mother returns from work, with a resulting loss in habits of industry and application.

Size of the Class

The make-up of the special class will, for the most part, be those students who are shown on the age-grade census chart as being most retarded, but the information contained in answer to such questions will not only aid in making a final choice, but will also aid in a more complete understanding of the needs of each child chosen. With the help of the census chart and the pupil questionnaire a list of from fifteen to twenty pupils can be made, the pupils so selected to be assigned to the special group or class.

Still another means of checking up on the choice of pupils to be given special work and assigned to special classes is found in a comprehensive testing program. Such a program will be made up of intelligence tests plus achievement tests in reading, in the fundamentals of arithmetic, in reasoning ability in arithmetic, in spelling, language, etc. Scores made in such tests are valuable for three reasons: First, they actually show the child's ability; second, they possess diagnostic value; and third, they serve as verifications of the decisions arrived at by other methods of determining who shall be assigned to work in the special classes. It is not at all difficult in a system enrolling four hundred to five hundred pupils in grades one to six to find twenty or more retarded pupils who are in need of special help and who will profit greatly from the work that can be given them in a special class. The type of work given to the pupils in such a class will vary, of course, as has been indicated, with the needs of the individual pupils making up the group. Indeed the expression "individual work" is the key to the situation. My own experience has been of this kind, and I recall a third-grade boy whose reading work for weeks was taken from the primer and first reader. It is not important that a pupil in

such a class read from a first or a fourth reader; but it is important that he be given work of such a degree of difficulty that he can do it successfully, and that it meets his individual needs.

Helping the Greatest Number

We have found that some retarded pupils profit greatly in a short time from the individual instruction possible in a special class and are able to return to their regular grade and do satisfactory work with the regular group. However, we also found after two years of trial that the enrollment in our special class, organized on the above plan, had become stabilized. Furthermore the pupils were so limited in ability that there was slight chance of their being able to take up work with the regular class and the result was we had no class in which to care for new pupils who had come to us retarded, or the pupils in the system who had fallen behind their grade. To remedy this we changed the organization and work of our special room and are making use of our teacher more along the idea of a coaching teacher. Still she works with small groups or special classes. We believed it would be possible for us to so organize the work that one teacher could take charge of nine special classes or groups.

The school day provides time for nine 30-minute periods, giving an opportunity for three special-aid classes in reading, three in arithmetic, and three in spelling and language. If these special groups were no larger than five to ten each, it would make the special training available for 45 to 90 pupils instead of the 20 which was the limit under the old plan. Again we realized that not all retarded pupils needed special work in all subjects. Some needed work in only one, some in two and a few in all special work possible. As the new plan of work has functioned this year, the teacher has organized three special-aid classes in reading, two in spelling and four in arithmetic, and thus during the school day session is meeting and helping 69 pupils.

The work of the special class, as far as possible, is planned to supplement the work the pupil is having in the regular grade and this special help given him by the coaching teacher, in many cases, has helped him to make quite a satisfactory showing in the work of his grade. We have found, too, that the new plan has given us greater opportunity to aid the pupil who has been absent because of illness and who needs individual help on the essentials missed so that he will soon be able to handle the work of his grade. For the child with extreme mental limitations, textbook work is almost entirely replaced. The special class is functioning best when it gives to the pupils enrolled the work they need most, with the frills omitted.

High-School Help

So far, I have dealt with special classes for pupils below junior high school. But the need for special classes and special instruction does not end when the seventh grade is reached. The few following examples will illustrate a general plan that is applicable for higher grades: All members of the ninth grade of some ninety pupils, were given two intelligence tests. On the basis of the results of these tests and the teacher's rating, when the four sections of English Ten were formed this year, one section was made up of pupils whose I. Q.'s were very low, or, who had failed English Ten last year, and who the teacher felt were in need of special work in English.

Still another illustration of a special class for high-school pupils: This year the ninth grade pupils were given the Otis Intelligence test and all pupils having an I. Q. of less than 80 were listed. The list contained fifteen names. A comparison of the I. Q. with

teachers' marks showed that in all but one case the I. Q. was a splendid measure of the quality of work the child had given us. One girl whose I. Q. was 72 according to the test had been doing good B work. We further tested the remaining fourteen with the Army Alpha Test, the Monroe Reasoning Test in Arithmetic, The Monroe Reading Test and the Thorndike-McCall Reading Test. In each of these tests the scores simply verified the intelligence test results and the teacher's rating, but we made special use of the things revealed in forming special classes and as a guide in reclassifying the pupils for second semester work. Some were placed in entirely different subjects than they had been taking first semester. All were asked to attempt to carry a lighter load.

In a similar way special classes can be organized for special needs in other subjects. This is entirely possible in smaller school systems when two or more divisions of a grade are necessary and will always be found profitable when individual needs of the pupil are given

A Successful Financial Scheme¹

When the school board of Aberdeen, Wash., was trying to work out a means by which it might furnish the required gymnasium facilities for its city, it was Superintendent George B. Miller who visioned and presented the plan for a combined, self-supporting natatorium-gymnasium, which since its development, has proved successful, even beyond what was hoped for it. And it has proved successful in spite of an epidemic of spinal meningitis which closed the schools for three weeks shortly after the opening of the natatorium, and in spite of a period of acute business depression occasioned by a bank failure.

It is an old and trite saying that nothing succeeds like success, notwithstanding, still a true one. Because the venture has succeeded so admirably, and because of the unusual scheme of financing and management, because it literally stands on its own feet, it has been called one of the outstanding pieces of construction of the present time in the Pacific Northwest. It has created widespread interest, and many cities through Washington, Oregon, and California, are making inquiries and a study regarding it. No doubt it will suggest to many other places a means by which they can overcome difficulties constructively.

The natatorium-gymnasium has been managed from the first on purely business principles, and at no time have subscriptions been taken or donations sought (or extracted) from those charitably inclined. No extra burden has been placed on the district or on taxpayers, and being wholly independent and on a sound basis, the construction has the high respect of everyone; and being entirely a student project and belonging to them, it has the very close interest and enthusiasm of the community.

Aberdeen had no natatorium. It is a growing, busy, wide-awake town, situated in a district of many water fronts and where, from the standpoints both of safety and of pleasure, it is almost imperative that everyone know how to swim. So Mr. Miller in his plans suggested that a natatorium and gymnasium be combined in one large building, thus meeting two great needs of the town at once. In addition to the loans it was necessary to get, he suggested selling \$25,000 worth of bonds to help finance the undertaking, then renting the gymnasiums to the school board until the building is paid for,

¹Note: Some time ago an article concerning the natatorium-gymnasium of Aberdeen, Washington, constructed and managed under a rather unique financial scheme, was published in the JOURNAL. This one deals with a fuller explanation of the construction, how it works, and its degree of success since its opening, less than eighteen months ago.

recognition and consideration. A careful study of the problem in any school will reveal that a large majority of the pupils have certain special needs, but it is especially true for the pupil who is handicapped in any way. It will help administrators if they will think of the problem from the standpoint that all pupils must be prepared to live and to earn a living. The special class will give to the child, handicapped in any way, a chance to work under quiet conditions with a teacher who understands his needs and his problems and who can give him the type of work he needs. He can work in an atmosphere of encouragement rather than the discouragement that he encounters in his attempt to keep up with the "stars" of the regular grade, oftentimes in the perusal of work beyond his understanding and of a nature he will never use.

Much can be done in this way even in a small school if we will only recognize the existence of the problem and make an honest and intelligent effort to find a solution.

at which time it becomes the property of the district.

The idea was accepted, grew, developed, and is being realized most admirably. Since it was a safe investment and had the sympathy and eagerness of the community, the people quite liberally invested in the bonds. These were sold for the most part by the school pupils, who took a great pride in their share of helping. A certain portion of the bonds were retired each year from the earnings of the natatorium-gymnasium, and of the different schools, six bonds having been retired to date.

The building includes the swimming tank with all its facilities and requirements, and two gymnasiums, a large and a small one, both of which are easily adapted to any kind of public performance. It was all completed, together with equipment, water connection, etc., at a cost of \$81,721.30, and was formally opened April 6, 1926. One year later, by its own financing system, the debt had been reduced to \$63,500.30, and the interest and payments had been met.

There are a number of sources of income from the building. The school board rents the two gymnasiums at \$300 a month during the school year. When the debt is paid off the building will return to the district as its permanent property. To outside basketball teams a fee of \$2 a night is charged. In addition the two gymnasiums are rented to private parties or organizations for entertainment purposes at the rate of \$25 an evening for the large one and \$10 for the small one. In the spring a flower pageant was given in the building in which all the grade schools of the city participated and which was directed by the supervisor of music. This alone cleared \$750 for the fund.

At the swimming tank a fee of 35 cents for adults and 25 cents for children is charged. Private groups may rent the tank after 9 o'clock p. m. at the rate of \$10 an evening. It is greatly in demand, both summer and winter, and many individuals and organizations avail themselves of the means of a pleasant evening's entertainment and sport.

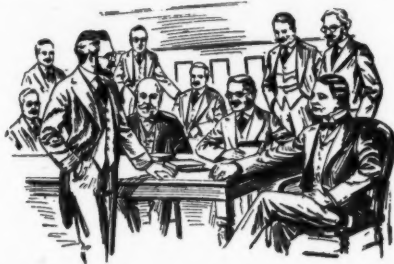
School pupils have taken an active and enthusiastic part in helping to make money, in equipping the building, in buying bathing suits, etc., and have entire care of the interest on the loan, toward which the student bodies of all the schools have pledged to give the proceeds of one entertainment a year. This rather welds them to the institution, makes them feel a vital part of it and invests them with a certain pride.

(Concluded on Page 154)

The Relations of the School Board and the Superintendent

From the Viewpoint of a Superintendent in a Small City

G. O. G. Rahn, Lisbon, N. Dak.



One of the prime requisites for the success of a school administration is the existence of mutual understanding between the school board and the superintendent as to the legitimate functions of each.

Of course, the school board, composed of duly elected representatives of the people, is the source of power in the operation of the schools; but since a school board is not made up of trained educators, it chooses a superintendent to administer the schools in its stead. It holds him responsible for results. But to achieve results, the exercise of power is necessary. What then are those powers which a board should delegate to its superintendent?

In not a few communities even today, this question is not yet clearly understood; for in the past there has been such an overlapping of activities that it has been difficult to fix responsibility. One of the reasons for this overlapping is not difficult to find; for almost all of our city schools in this section of the country have become such only during the last generation. They began thirty-five or forty years ago as district schools, employing one or two teachers. Naturally, the members of the board were obliged to do everything but the teaching; for the teachers were not trained for other than academic work. As these schools grew, a superintendent was employed to exercise general oversight; but as the board had administered the business affairs of the school theretofore, it continued to do so.

The schools continued to grow. From institutions expending several hundred dollars a year, school systems have grown until today they are among the biggest business enterprises in the various communities from a financial standpoint. With so much money involved, one of two alternatives had to be chosen in order that the business affairs might be handled with efficiency and without waste. Either the members of the boards would have to spend a large amount of time on school affairs; or many of their powers would have to be delegated to a trained executive. Since adequate attention to school affairs would mean the sacrifice of time that should be spent on their private business, board members chose to employ superintendents qualified to administer the business affairs of the schools as well as the educational affairs. Challenged by the demand for this type of executive, colleges of education set about the task of giving their students the needed training. For the purpose of determining what responsibilities the superintendent should carry, education turned to corporate business with the question, "What are the functions of your executives?"

A Business Parallel

Since the organization of a business corporation with its board of directors is parallel with that of a school district, the question was well placed. Because of the success which corporations have had, they were well qualified to answer.

And their reply came clearly, "We, as directors, do not attempt to actually operate the business. For that purpose we hire trained executives. To these executives we give large authority and then hold them responsible for results. It is only in the larger matters of determining policy that we, as a board of directors, act. And even in this sphere, we look largely to our executive officers for the proposal of policies for our adoption; for naturally the executive working every day with the affairs of the corporation has a keener insight into the

needs of the business than we, as lay directors, can hope to have. If we find that an executive does not have such a grasp, we look for some one who does."

From the lesson taught by corporate business, there has evolved the clear-cut definition that the functions of the school board are legislative; those of the board committees, advisory; and those of the superintendent, executive.

Although this arrangement reposes considerable power in the superintendent, it at the same time imposes definite responsibilities which he must meet. It makes possible holding him definitely responsible for results. If, having such powers, he can not build up a school system that is more efficient and more economical than were the old systems of divided and befogged responsibility, it is evident that he does not have sufficient strength for the job.

Without such power, a superintendent cannot fairly be held accountable for results. Unless he has a free hand to carry out those ideas essential for the building-up of the schools, he can achieve at best only partial success.

The Choice of Teachers

Subject to approval by the board, he should, for example, have free choice in the selection of his teachers; for he should know better than anyone else what personal and educational qualifications will best fit in with his objectives. Furthermore, since he is the one who must work with them, his selection should not be fettered. Then, too, the teachers, employed through selection by the superintendent, cannot but feel a responsibility to him that will aid him in developing and maintaining a proper esprit de corps. Of course, in his deliberations he should advise freely with the teachers' committee of the board in order to get the benefit of any help that can be given; but no teacher should be chosen who is not acceptable to him in every way.

Likewise the choice and purchase of textbooks and supplies should be left to the superintendent, who should of course be aided by the recommendations of his daily coworkers. That this authority be so placed is essential; for a member of a board of laymen cannot be expected to take the time to acquaint themselves with the educational merits of this or that book or the desirability of this or that map.

Similarly all alterations and repairs should be made according to the best judgment of the superintendent; for such alterations must be made according to the educational needs of the children. Since he should know those needs better than others, reliance should be placed in his judgment. If the board does not expect that all such recommendations come from the superintendent, the members are not utilizing the skill for which they are paying. If, furthermore, the board makes alterations without the studied recommendations of the superintendent, it may easily conflict with standard educational requirements, for example, as to lighting, ventilating, or floor space per pupil. They may order one room intended for laboratory purposes too small to be practical, and a

classroom unnecessarily large. On the other hand, if some member of the board, as is frequently the case, has had considerable experience in building, common-sense dictates that the benefit of that member's experience be fully utilized by the superintendent. However, since a school is primarily a place for educational activities, educational needs, which the superintendent as the skilled executive should know, should be paramount in making final decisions.

The Child as the Beneficiary

By thus coordinating all executive activities in the one head, the efforts of the school converge in the one activity—the education of the child. At the same time there is opportunity for an efficiency and economy that cannot be achieved by one committee carrying on one executive activity; and another, something else; and so on.

Since practically all boards are composed of outstanding men in a community, they have vision enough to see the wisdom of shifting responsibility to the superintendent as soon as he demonstrates that he is capable of carrying it. When they come to realize how much more can be accomplished in this way, they insist that he assume not only part of his load, but all of it.

In order that they may know that the executive officer is functioning, school boards require written monthly reports and an annual report. In these reports the superintendent should relate what has been accomplished since the last report and what progress the school is making in various respects in comparison with its own record as well as with other schools. He should acquaint them with the assessed valuation and the probable amount of money that will be available as compared with the budget requested. At monthly meetings he will lay before them a report of the money thus far received by the treasurer, together with a statement of expenditures, which he summarizes from his distribution ledger. He informs them concerning various bond issues outstanding and the adequacy of provision for sinking funds. He computes the proportion of the total city tax that is used for the support of the schools and compares it when possible with that made by other school systems of equal rank.

If he wishes to initiate some new policy, he does not try to carry it by the mere force of his own opinion; but he submits accurate data in support of his cause so that the board may see that the request is founded on fact and not on fancy. If the case is not strong enough, the groundwork for intelligent discussion has at least been laid. But opposition is usually small, as we have all experienced, when a carefully thought-out plan, fortified by facts, is submitted for adoption.

The Budget Problem

Before drawing up the annual budget, an estimate of needs of the entire school system is prepared in detail by the superintendent. This estimate of needs is founded of course upon the expenditures of the current year and upon the additional basis of janitors' and teachers' requisitions, revised by the superintendent. When bids upon the various items in the estimate have been obtained, the proposed budget for the coming year can be drawn up and presented to the board, together with a summary of the expenditures of the current year. By comparison, it can be quite accurately determined just what the proposed budget will buy. If "cuts" must be made, just what branch of the service is to suffer must be determined.

Since it is through the budget that the board exercises its chief control over the superintendent, the necessity of ample justification for every item is evident. Although the approval of the proper committee should previously be secured for any proposed extension of the present scope of educational activities, yet it is surely well to outline in detail and in writing, for the consideration of the whole board, the reasons that make such an extension advisable.

It is becoming more and more the common practice to rely upon the superintendent's trained skill in administering the budget, when once it has been adopted by the board. The major requirement is that he keep within the budget. The monthly business statement to the board reveals how well he is succeeding. Expenditures beyond the allotted amount tell the tale of faulty judgment or mismanagement.

For the superintendent, a big value of making expenditures on the basis of the budget is that he can see quite accurately at all times just what he can do and what he cannot do.

Another business practice that shows the board that affairs are being conducted on a safe basis is a properly safeguarded plan of ordering. By making all purchases with the aid of a triplicate order book, the superintendent has an accurate record of what he buys. As soon as the goods are received and checked, the duplicate order blank can be removed from the book and attached to the invoice. Thus he is enabled to present the bills in systematic order to his finance officer for endorsement. After the warrants have been drawn by the clerk and are ready to be mailed, the superintendent can enter on the triplicate in his order book the number of the warrant through which each particular order is paid. Thus the transaction has a continuity that gives exact and definite knowledge as to its status at all times.

The Convenience of a Petty Cash Account

A convenient method of paying for sundries, that saves the board the necessity of approving each individual small bill is carrying a "superintendent's account" at a local bank. By having a hundred dollars deposited in this account as often as necessary, the superintendent is enabled to pay for small orders at the time of purchase.



MEMORIAL TABLET IN ROGER SULLIVAN JUNIOR HIGH SCHOOL, CHICAGO, ILL.

The accompanying cut shows a photograph of a memorial tablet recently erected in the Sullivan Junior High School, Chicago. The tablet was designed and executed by Miss Nellie V. Walker, a Chicago sculptress, and was presented by the family of Roger C. Sullivan, for whom the school was named.

The tablet stands 5½ ft. high and is placed on the wall over a mantel in the main reception room of the school.

The tablet represents a happy combination of an inspirational subject in a cheerful rendering, in which there is no suggestion of the mortuary effect. The Chicago schools have in recent years discouraged the use of tablets in school buildings because of their generally mournful character, but the Sullivan memorial is recognized as a most happy example of the possibilities of a tablet conceived and executed with children in mind.

chase. With this system, the necessity of running small accounts with local merchants is eliminated. Not only is the irritation attendant upon presenting a large number of small bills banished; but the merchants themselves appreciate receiving their money at the time the sale is made. In order that the board may have an adequate check upon this account, a monthly itemized statement accompanied by the cancelled checks can be presented.

(Continued on Page 140)

A Successful Teachers' Organization in a Small System

J. C. Knode, Laramie, Wyo.

The school system in which the plan here described has functioned contains 70 teachers—a few very superior ones, a good many good ones, a good many of average ability, and a few poor ones; in other words, its personnel is average, and typical of many American systems. Among these teachers general meetings used to loom upon the horizon as events to be dreaded; today, they are, thanks to a method of representative organization, quite successful, and apparently increasing in effectiveness.

This organization of the teachers comprises an upper council and a lower council. The former is a constant body whose members, by virtue of position, belong automatically. These are the superintendent, the building principals, the grade supervisors, and the research director. Members of the lower council are elected each semester, with one representative from each of the smaller buildings, two from the larger buildings, and representatives from the teachers of special subjects. The convenient number of members of the lower council is nine. They elect a president, a vice-president, and a secretary-treasurer; then the president divides the whole group, including officers, into three standing committees that function throughout the semester; namely,

a social committee, a school-improvement committee, and a committee on civic affairs. The first of these plans for the larger get-together affairs of the faculty during its term of office. Last year the committees engineered a large party during the winter and a picnic during the spring. The second committee has proved itself valuable by being, in every instance thus far, thoroughly sensible. Its reports have been specific and practical, there has never been any tendency toward unpleasant criticism, and a number of its suggestions have been put into effect. Finally, the originators of the plan felt that teachers should make an effort to identify themselves with community undertakings and enterprises. On one occasion this committee interested itself in a proposed viaduct that would greatly relieve the difficulty of access to a section of the town in which one of the schools was located. At another time it undertook the task of establishing closer relationship between the city library and the schools. Last year its project was the introduction of the Campfire Girls' organization.

The upper council meets at intervals of three weeks, and comprises the superintendent's advisory body. Besides routine matters, the group

has constantly under consideration two or three major problems. For example, at the present time these happen to be the matter of individualizing instruction. Various phases of these problems are reported on by members of the group, and the effort is constantly made to embody the conclusions in concrete practices.

Upper and lower councils have, to be sure, little direct contact, but indirectly each reaches the other through the general teachers' meeting and the meetings which building principals must hold with their own teachers. However, the lower council has the privilege of appealing to the upper group at any time for suggestion and advice; and in the event that any general school situation seems, in the minds of lower council members, to demand consideration, an appeal may be made in a similar way. Further, the existence of the upper council disposes immediately and finally of the question of membership of principals and supervisors in the lower body.

It is because both councils carry their work to completion in the general teachers' meeting that the latter have attained their present degree of success. The programs for these meetings vary, of course, in many ways, but the following fairly exemplifies their trend:

PROGRAM

General Teachers' Meeting

October 5.

High-School Building

- 3:30—3:45 Announcements (Including some criticisms of teachers' English)—The Superintendent.
- 3:45—4:00 Reports of Lower Council Committees—Social, Civic Affairs, School Improvement.
- 4:00—4:10 "What to Look for When You Visit a Home"—Louis Brown, Attendance Officer.
- 4:10—4:20 "Home and Health"—Mary Robbins, School Nurse.
- 4:20—4:30 "Home Background in School Performance"—Margery Pittman, Research Director.
- 4:30—4:45 Group Meetings (Primary, Intermediate, Junior High, Senior High, Special Subject). Reports of Visits to Other Schools. Announcements of Supervisors or Principals' Discussion.
- 4:45—5:00 Stunt by Building Faculty.
- 5:00 Refreshments.

(Don't forget to visit the exhibits.)

These meetings are carried from building to building. Thus six buildings provide for six general meetings, and teachers who usually would never step inside a building other than their own are forced to visit the workshops of their fellow teachers. The meetings begin on time. A sufficient period is allowed for assembling; then absence and tardy marks are chalked down by principals against all offenders and reported to the superintendent.

Announcements oftentimes do not take fifteen minutes, but the superintendent always uses his full allotment. Sometimes the topic is the teacher's spoken English, and only errors overheard in the classroom are discussed; sometimes a short questionnaire is used to ascertain individual responses to a book teachers have been asked to read—and incidentally to discover whether they are reading it at all; sometimes the questionnaire deals with methods, sometimes with individual problems, sometimes with self-improvement. There is seldom much formal lecture from the superintendent, but there is a good deal of informal comment.

There follow then the reports from lower-council committees. The reports of civic and school-improvement committees are matters of conference with the superintendent before they are presented to the general meeting. Here they sometimes arouse discussion, but more often they serve simply as the program of the committee for the ensuing weeks, or indicate progress that has already been made. The social committee's task, it may be added, is considered a very serious one, and debates on its reports occasionally wax long and furious.

The main talk or talks of the afternoon are provided by the superintendent. The general aim is the development of social outlook. The

(Concluded on Page 154)

School Housekeeping

(Fourth Article)

M. S. Olsen, Director of the Janitor-Engineer School, Minneapolis Board of Education

THE JANITOR-ENGINEER

"Costly thy habit as thy purse can buy,
But not expressed in fancy; rich, not gaudy;
For the apparel oft proclaims the man."

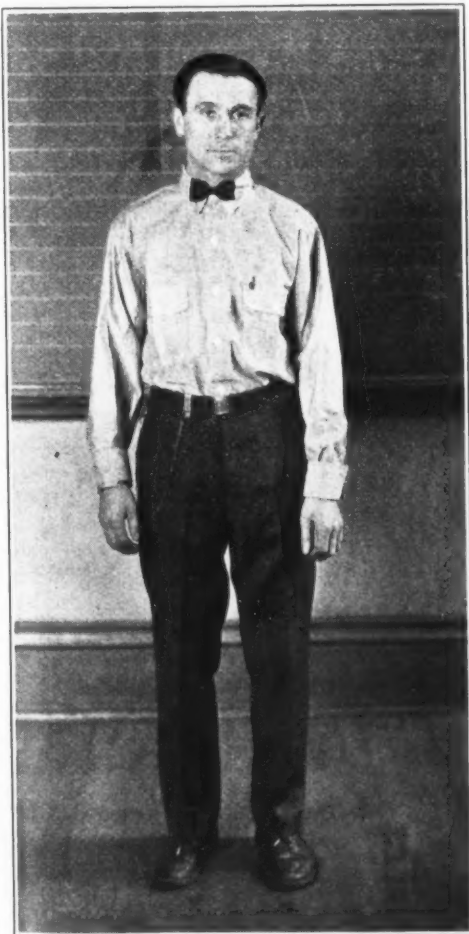
—Hamlet.

Vacancies in the janitorial service should be filled with the same care as vacancies in the teaching corps. Possibly greater caution is called for, since teachers in the smaller communities come and go while the janitor no matter how inefficient, may stay on for life. Politics should not enter into the selection. Janitors should be selected by the superintendent of schools or his representative so that the community may hold one person responsible for the efficiency of the whole system. Furthermore, the superintendent or his representative is, by virtue of their professional training, more competent to make such selection than any one else.

Character is the fundamental factor in the final choice. Given a man of good character, the second consideration should be good health. Thirdly, he should be of average intelligence. He should be interested in children and endowed with a kindly personality. And finally, to quote Will Hays, he should realize "that service is the supreme commitment of life."

The Janitor's Place in the Sun

The janitor is to the school what the mother is to the home. If he is slovenly and careless in his personal appearance and habits, it is only natural for the children to be the same. What is true in the home will be true in the school. Therefore, a janitor by virtue of his close contact with the children, sets an example for them to follow and inevitably becomes an important contributor to education—by example instead of preachment. Consequently, it behooves the janitor to consider his personal appearance. Cleanliness begins in the individual and the neat-looking janitor will be surprised to note how quickly the children will react to good personal appearance.



STANDARD JANITOR-ENGINEER'S UNIFORM.

By keeping pumps, engines, boilers, boiler room and tools clean, it will be much easier for the janitor to remain clean in person and thus be ready at a moment's notice to appear in any part of the building without any concern as to personal appearance.

The Janitor-Engineer's Dress

A standard dress for janitor-engineers must necessarily be based on its cost, as salaries are seldom very high in the janitorial service. The uniform dress illustrated has been tried out for about five years. It was originated by a committee of janitor-engineers and has proved to be low in cost, durable, easy to keep clean, and smart in appearance.

The shirt is a real problem in dress for the janitor. It must wear well; it must be non-fading and nonshrinkable; it must not "spot" or show dirt easily; its cost must be low. To meet all these requirements, only one shirt can be recommended. This is a *woven* shirt of gray and white threads. Its appearance is gray and repeated washings have proved that there is no change in color. Its texture is fine and the shirt is of good design and workmanship. This soft shirt with attached collar is a favorite with many military academies. Owing to its color, it does not show dirt readily. It retails for \$2, but can be purchased at a good discount from one retailer when the group of janitors is large enough to warrant such discount.

The trousers are all wool, of dark gray color. Quality and durability should be considered more important than price; in other words, "the best is the cheapest." Cheap trousers do not wear well, do not clean well and will not stay creased. A janitor should purchase two pairs so that one may be cleaned and pressed each week. Ordinarily it will not be necessary to dry clean more than one pair each month. They should never be washed in water, since wool shrinks and becomes almost impossible to iron out to fit the wearer. The janitor-engineer who buys well-fitting trousers and keeps them clean and well-creased cannot fail to appear well dressed.

The tie selected for the standard uniform is a medium sized, black bow, made with an elastic band to hold it in place. Due to the janitor-engineer's work with machinery and equipment, this style of tie has proved to be the most satisfactory. It is cheap in price but comfortable and neat looking.

Belt. Suspenders are not permitted in the uniform dress, unless they are of the type that can be worn under the shirt. This is due to the fact that janitor-engineers on duty are without coats or vests. Belts are therefore necessary and a black belt with silver buckle harmonizes well with the rest of the uniform.

Shoes. The janitor-engineer should select his shoes with particular attention to comfort as he is on his feet most of the time. They should be black. They should also be well polished at all times.

The Care of Face and Hands

Practically every school building is supplied with trisodium phosphate powder for cleaning floors, woodwork, furniture, etc. This is an oil solvent and the janitor should have a supply of it near his soap dish. It will quickly remove the grease and oil from his hands and face, after which just a bit of soap should be used to remove the slippery "feel" of the skin and also to prevent chapping. Clean hands and face should be insisted on before appearing before children or faculty. Shaving should be made a daily task.

Because of the nature of his work, the model janitor is forced to wash his hair frequently. Besides this, one must budget himself for a hair cut each month.

Women in the Service

Where the buildings are large enough to warrant the employment of more than one or two men, it is common to find women in janitorial service. These should be selected with the same care used in choosing the men. Traditionally, women appreciate more keenly the importance of good appearance than do the men and it is therefore unnecessary to emphasize the care of hands, face, and hair.

The dress of the janitress is made of gray Buster cloth. The design is long waisted with white collars and cuffs. It is a simple uniform, inexpensive and easily laundered which is important as soiled dresses should not be permitted. The janitress is under the constant scrutiny of pupils and teachers and because of the nature of her work, a neat appearance is doubly appreciated and therefore worth striving for. Shoes should be black, comfortable, and neat in appearance.

The above suggestions on what the janitor-engineer and janitresses should wear in order to present a pleasing appearance are made with a full appreciation of his or her income. Shopping will convince the skeptical that these uniforms are as low in price as any that can be devised. It will be noted that coats and caps for the men are not mentioned, as neither should be worn on duty inside the building. So little time is spent out-of-doors by the average maintenance man or woman that any coats, caps, sweaters, etc., are satisfactory so long as they are clean. Did you ever stop to think how well "gray" harmonizes with almost any other color?



STANDARD UNIFORM FOR WOMEN CLEANERS AND HELPERS.

Cafeterias, Their Management and Equipment¹

Winifred A. Hart, Supervisor of High-School Cafeterias, Bridgeport, Conn.

The advance in the development of high-school cafeterias in the past ten or fifteen years, has been very marked, and the interest of boards of education in this phase of high-school life is rapidly awakening, so that now we seldom find a new high school of the junior or senior type, but what it has adequate arrangements and facilities provided for the students where they may relax and eat their lunches, and modern up-to-date equipment provided for the preparation and serving of the right kind of food for these adolescent girls and boys.

In past years this was not the case, and there are still many cities and towns where boards of education have to be aroused to the fact that proper lunch facilities must be provided in a modern up-to-date school system.

Problems in Planning Cafeterias

The two problems to be faced are, first, how to remedy the situation in many of the old high schools, built without thought of a lunchroom. As the demand for lunches has had to be met, a dark, gloomy part of an unused basement has been utilized for the purpose. Where such conditions exist, it is a serious problem how this condition can be remedied, because it costs money to paint, install plenty of artificial lights, and modern labor-saving devices, with attractive serving facilities. Yet the health of the students requires this, and money wisely applied to bring about the required changes is well spent.

The second problem to face is the danger of allowing the situation to swing too far the other way, by that I mean, providing a large space for lunchroom purposes only, and installing too much expensive equipment in the kitchen. Lunchroom space is used at the most, only two hours a day and lies idle the rest of the time. With the mounting costs of building construction, as well as building equipment, is it not essential to plan that the lunchrooms be so placed in buildings that they can be utilized for other purposes, such as study rooms, when not required for the eating of lunches? This can be done if arrangements are planned for completely shutting off the kitchen and service section.

One of the best examples of this arrangement is the Weaver high school at Hartford, Conn., where the kitchen is built in a recess on one side of the building, the service section only extending into the lunchroom. Partitions are so placed and folding doors so installed that, at the end of a lunch period, the entire unit is shut off from the lunchroom proper, and the women clean the counters and do their work without anyone in the large room being disturbed.

This is also a splendid arrangement when social activities are taking place, such as dinners, etc., with after-dinner speakers. The doors can be closed and the women can continue with their work without disturbing the guests. What is more important, the overtime payroll can be materially reduced. Another reason for the complete separation of the kitchen from the lunchroom, is that it becomes possible to lock the kitchen and serving sections at night. A new lunchroom in Bridgeport has no way of being locked up at night and that means that everything movable must be locked up in cupboards and storerooms every night.

It seems to be the consensus of opinion that the best location of the lunchroom is in the

basement of the school building. If any one requires an argument for placing the lunchroom on the top floor of the building, it would be well for him to visit a school where it is so located. The lunchroom in the Atlantic City high school is an excellent example; it is built over the auditorium, on the third floor of the building, and is beautifully located. From some of the windows a glorious view of the surrounding country and also of the ocean may be obtained. It is well adapted for the many evening affairs held there and is very well managed.

Planning the Equipment

When equipment is planned, much serious thought must be given to the needs of the situation. A high-school cafeteria has to prepare but one meal a day, five days a week. It is different from a college cafeteria which must provide three meals a day, every day in the week. It differs, too, from a commercial cafeteria, which must have food on sale from early in the morning until late at night. I am not objecting to modern, up-to-date equipment—no one is a stronger booster for labor-saving devices than I am—but I do hold that the equipment should be selected to meet the exact needs and no more.

A year ago the Harding high-school lunchroom at Bridgeport, was visited by Mr. W. S. Ford, who was making a study of twenty high-school lunchrooms in the east, their equipment, and management. One of the questions asked was, "What equipment do you have that is not used for the purpose for which it was meant?" Our answer was "none." He carefully looked over everything, and found our statement to be a fact. It is also a fact that we are still using all our equipment, and after two years do not feel the need of any additions to our labor-saving devices. We have all we need in the way of ranges, bakeovens, broilers, electric mixer, potato peeler, dishwashing machine, electrically controlled refrigerator, and so on, but we do not have a vegetable steamer or steam kettle for soup, etc. We do not need them. In equipping new buildings, we must not over-equip.

In remodeling old buildings, similar problems constantly arise: The required equipment can be purchased, but installation is another matter; water and sewer connections are baffling; the added load of new electrical equipment to an already overloaded electrical system, brings in the school electrician with a serious complaint; the installing of ranges and bakeovens raises the question, "Where is the chimney?" and so on. All experienced school officials are familiar with the difficulties, where there is in the school system, a bright and shining new high school and one or more older buildings that are clamoring for the same service and equipment enjoyed by the new school.

The Operation of the Cafeteria

When equipment is installed, the big problem is how shall the lunchroom be run. Three plans are most generally used:

1. Under the management of parent-teacher associations.
2. By the school as a private undertaking.
3. Under central control, by the board of education office.

The first method is used mostly as a way of convincing boards of education of the need of a lunchroom and of the possibility of operating the same on a self-supporting basis. I think the experience of Providence, R. I., is an outstanding example of a community where for a number of years the parent-teacher associations had equipped and operated all school lunchrooms. When they were well organized and on a paying

basis, the board of education took over the control of the lunchrooms and placed them under the supervision of one person.

By far the greater number of lunchrooms come under the second plan and this seems to be the most popular way of running them. But it is a question whether it is the most business-like way or one for the best interests of the students.

Under this plan one of two methods is adopted. Frequently, the domestic-science teacher assigned to the school, has as part of her responsibility the management of the lunchroom, using a number of her pupils as helpers in serving the meal, and hiring a cook and one or two other women to do the cooking and cleaning up. We frequently read interesting accounts of lunchrooms run in this way, of the very low cost of operation, and of the low prices per portion for food. When we analyze the situation, why should this not be true? The teacher's salary is paid by the board of education and the student-help usually receive their dinners in exchange for services rendered, so that the actual overhead is the weekly pay of one to three women.

School Responsibility Not Satisfactory

The second type of this plan requires that the principal of the school assume responsibility for the lunchroom. Sometimes he appoints a committee of teachers to supervise the lunchroom, or again, he takes full responsibility himself. Here we generally find that a woman with good practical experience is installed as manager, with full power to hire help, buy supplies, and plan the menus. She is given the injunction, "Make the lunchroom pay."

Seldom under these methods of operation does the board of education have much responsibility as to equipment or supervision, and in many places the financial problem far outweighs the question of what is the best food for the students. When a manager has to make enough money to pay for her equipment, she naturally plans all the time for food that can be served at a very low cost, with a wide margin of profit, food that the students will eat, whether it is good for them or not. One of the points to be emphasized in school lunchrooms is that the students shall have the right kind of food to maintain good health; the lunchroom places before them in the most attractive manner the foods they should eat, and reduces to a minimum the ones not best for their well-being.

As an illustration of the unfavorable conditions which result when the financial viewpoint is uppermost, one city may be cited. There are in the community several schools in which the lunchrooms are operated as individual undertakings. In one of the schools there are about three thousand students. When I visited the school, the lunchroom had been in operation about eight years. It was a matter of pride to the school that no article of food sold for over five cents. The sandwiches I found were made without butter (and everyone knows how important butter is to the diet, especially in that of growing girls and boys). They offered an assortment of cookies (mostly covered with so-called marshmallow icing and sugary concoctions which catch the eye, but spoil the stomach), an assortment of candy, some fruit, milk, chocolate milk, and ice cream. There was one steam table where soup, a meat dish, potatoes, and a dessert were sold. Not more than a hundred students out of the three thousand enrolled bought warm lunches. The manager of the lunchroom, during the eight years, had paid for the painting of the lunch-

Editor's Note: We are rapidly developing standard methods of managing and equipping school cafeterias. The present paper shows how one city has unified its cafeteria service and has put it on an efficient self-sustaining basis. The paper was the basis of an address at the convention of the National Association of Public-School Business Officials, May 19, 1927.

room and the teachers' dining room; she had bought and installed a dishwashing machine, a bakeoven, a range, a meat slicer, and a coin counter and sorter. In fact, she had a fine, modern equipment and a nice balance in the bank. The lunchroom was well equipped, but certainly the students were not well fed.

Weak Methods of Finances and Purchasing

Under these two methods of running a lunchroom, the finances are handled within the school. Either the commercial department keeps the books, or a teacher is assigned to that task, or the manager takes charge. The money is banked and the principal of the school signs the checks after the bills are O.K'd by the person or department having responsibility for the same. In some instances, reports of the financial transactions are required by the board of education; in others, no reports are made other than to the principal of the school.

Under this arrangement the purchasing of supplies is left to the person in charge. Little is done in the way of contracting for supplies; goods are bought as needed, with a tendency to patronize a nearby grocery store, instead of shopping for a good product, at a low price.

The third and last plan, namely, central control or control from the board-of-education office, is the best and most businesslike method. With the board of education providing the initial equipment and placing somebody in direct control of the running of the lunchrooms, all business transactions, such as purchasing supplies in quantity and handling the daily receipts, are cared for by the office of the board.

Central Control in Bridgeport

Perhaps our experience in Bridgeport in changing from one system to the other will be helpful. Prior to September, 1925, a lunchroom had been maintained for a number of years in the Central High School. The management had supplied lunches to a small high school for boys located across the street, also for a year or so to another small high school some distance away. As all high schools were on part time, it was only a question of providing "recess" lunches and of serving approximately 150 teachers and students with a warm dinner at noon.

With the opening of another large high school, the Warren Harding, in September,

(Continued on Page 146)

one-teacher, rural schools. Eleven more per cent are two-teacher schools. Thus a total of 82 per cent of all the school districts in the state are one- and two-teacher schools. This is clear evidence of the fact that Oregon's school system is largely a rural one. These one- and two-teacher schools enroll approximately 27 per cent of the entire school enrollment of the state. This means that from the standpoint of equalizing educational opportunities Oregon's problem is largely one of providing adequately for its rural schools.

At the present time Oregon has no state equalizing fund with which it can equalize the tax burden among the districts of the state. There are only two funds outside of district support that contribute any material help to the districts. These funds are the Irreducible School Fund and the Two-Mill Elementary Tax. The Irreducible School Fund is the permanent fund produced from the sale of the sixteenth and thirty-sixth sections of each township in the state. The Two-Mill State Elementary Tax theoretically is a state tax, but in reality is only a county tax since the proceeds of each county are returned to the county for distribution. Neither of these taxes is an equalizer of the tax burden among the districts of the state. In fact, when the needs of the districts are taken into consideration, there is a high negative correlation between the amount the districts receive from these funds and their financial need when this need is expressed in terms of total amount of teachers' salaries. So that instead of being equalizing funds, these two funds produce greater inequalities among the districts than would otherwise exist. In other words, the districts having the greatest need receive least from these funds, and the districts having the least need receive the greater amounts from them. There are some other outstanding facts in this connection. The wealthier districts also receive more from these funds than the poorer ones, and also make the least effort, and of course have the least needs, and in most instances the poorer districts are paying the better salaries. Hence, the poorer districts have the greater efforts, and they receive the least from these two state funds. Following is a series of tables which show the wide range of distribution in the districts among the factors: need, effort, ability, school census, and the amounts received from the two-mill tax.

It can be seen from Table I that two districts in Curry county, for example, may each receive \$119.73 from the two-mill elementary tax and one of those districts will pay less than 1 mill tax while the other district will pay 41 mills. Or from Table II two districts in Benton county may each receive \$148.16 from the two-mill tax and one of them pay \$75 salary per month while the other pays \$145 per month. Or from Table II, of two districts in Wasco county, each receiving \$164.65 from the two-mill tax, one has less than \$3,000 assessed value back of every school child while the other has more than \$52,000 assessed value per school child. It is evident that with such a basis of state aid there can be little possibility of equalizing the burden.

From the "total" column of Table I is obtained the distribution of the tax rate of 383 one-room districts in ten counties of the state receiving from \$119.73 in Curry county to \$361.94 in Douglass county from the two-mill tax.

From the "total" column of Table II is obtained the distribution of the ability of 487 one-room districts in ten counties of the state each receiving from \$119.73 in Curry county to \$361.94 in Douglass county from the two-mill tax.

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The Problem of Financing the Rural Schools

Homer P. Rainey, University of Oregon

From the point of view of the state the great problem of educational support is the rural problem. The cities and smaller towns and villages have been and are meeting the problem fairly adequately. But in each state there is the great problem of providing adequate educational opportunities for the rural child, and also of equalizing these opportunities and the burden of support. It is the purpose of this paper to present an analysis of this problem for the

State of Oregon, and in doing so it will probably touch upon some of the fundamental problems of every state in this connection. The data for this study are taken from a survey of 10 counties. There are 36 counties in the state. These 10 counties represent every section of the state.

Oregon has a large problem in providing for its rural schools. Seventy-one per cent of all the school districts in the state are one-room,

TABLE I
The number of one-room districts in ten counties in Oregon paying various tax rates and each in the same county receiving the same amount from the two-mill elementary tax.

Mills	Linn Co. 171.50*	Union 143.75	Douglass 361.94	Clatsop 247.50	Lake 253.80	Wasco 324.	Jackson 158.82	Benton 148.16	Curry 119.73	Clockawas 164.65	Total
0- .99	12	5	5	4	1	3	2	3	1	3	39
1- 1.99	17	10	24	5	5	6	5	5	1	11	89
2- 2.99	11	7	12	5	0	9	5	3	1	14	67
3- 3.99	4	0	8	1	1	6	10	3	0	8	41
4- 4.99	4	3	17	2	0	6	6	1	2	5	46
5- 5.99	1	0	12	0	1	3	3	1	5	6	32
6- 6.99	0	1	2	1	—	5	5	0	1	2	17
7- 7.99	1	0	1	0	—	2	4	2	—	1	11
8- 8.99	1	1	1	1	1	1	1	0	—	3	10
9- 9.99	1	0	1	—	—	3	1	1	—	2	8
10-10.99	—	—	—	—	—	0	1	—	—	2	3
11-11.99	—	—	—	—	—	0	2	1	—	2	5
12-12.99	—	—	1	—	—	2	—	—	—	—	3
13-13.99	—	—	1	—	—	—	1	—	—	—	2
14-14.99	—	—	—	—	—	—	—	—	1	1	2
15-15.99	—	—	—	—	—	—	—	—	—	—	—
16-16.99	—	—	—	—	—	—	—	—	—	—	—
17-17.99	—	—	—	—	—	—	—	—	—	—	—
18-18.99	—	—	—	—	—	—	—	—	—	—	—
19-19.99	—	—	—	—	—	—	—	—	—	—	—
20-20.99	—	—	—	—	—	3	—	—	—	—	3
Above 21	—	—	2	—	—	—	2	—	1	—	5
	32	27	85	19	9	46	46	22	14	60	385

*Indicates the amount each district receives from the two-mill tax.

TABLE II
The number of one-room districts in ten counties in Oregon having various amounts of taxable wealth per school child, and each in the same county receiving the same amount from the two-mill elementary tax.

Ability In Thousands Per Pupil	Clockawas 164.65*	Curry 119.7	Benton 148.16	Jackson 158.82	Wasco 324.	Lake 253.80	Clatsop 247.56	Douglass 361.94	Union 142.68	Linn 171.50	Total
0- 2,999	51	3	13	8	4	0	2	10	2	8	98
3- 4,999	18	2	11	13	6	0	3	24	4	17	98
5- 6.	3	0	8	8	8	3	2	12	8	23	75
7- 8.	2	5	4	9	11	—	—	7	3	12	53
9-10,999	—	3	2	1	4	—	3	7	1	11	32
11-12,999	—	—	1	3	1	2	3	5	3	10	28
13-14,999	—	—	—	1	—	1	—	6	2	6	16
15-16,999	—	—	—	0	1	—	—	1	1	4	7
17-18,999	—	1	1	1	2	—	—	1	3	1	10
19-20,999	1	—	—	—	—	1	1	2	2	4	11
21-22,999	—	—	—	2	2	2	—	2	2	—	8
23-24	—	—	—	1	1	1	—	1	1	—	5
25-26	—	—	—	1	1	—	—	—	2	1	6
27-28	—	—	—	—	—	3	—	—	2	1	6
29-30	—	—	—	—	1	—	—	—	—	—	1
31-32	—	—	—	—	—	—	—	—	1	—	1
33-34	—	—	—	—	—	—	—	—	2	—	2
35-36	—	—	—	—	—	—	1	—	—	—	1
37-38	—	—	—	—	—	3	—	1	—	—	4
39-40	—	—	—	—	—	1	—	1	—	—	2
41-42	—	—	—	—	—	1	—	1	—	—	2
43-44	—	—	—	—	—	—	1	—	2	1	4
45-46	—	—	—	—	1	—	—	—	—	1	2
47-48	—	—	—	—	—	1	—	—	—	—	1
49-50	—	—	—	—	—	—	—	1	1	—	2
50-51	—	—	—	—	—	2	3	2	—	3	0
Above	—	—	—	—	—	—	—	—	—	—	10
	75	14	40	47	42	21	19	83	41	101	483

*Indicates the amount each district receives from the two-mill tax.

The Seattle N. E. A. Convention

O. H. Barnhill, Pasadena, Calif.

The 65th annual summer meeting of the National Education Association, held at Seattle, July 3-8, was characterized by enthusiasm, harmony, and large attendance. The attendance was somewhat surprising, considering that the convention was held in a corner of the United States remote from the centers of population. Many of the delegates, however, looked upon the long journey to the Pacific northwest as something of a vacation outing, since it afforded a chance to visit one of the most beautiful and interesting sections of America.

One thousand and one delegates registered, while the number of others in attendance was estimated at between 11,000 and 12,000. While all branches of public-school work were fairly well represented, a larger number of classroom teachers would have been welcomed. This sentiment was reflected in the election of one of these soldiers from the rank and file of the school army to the presidency of the association, something unprecedented in its history.

Many of the conferences were so largely attended that their efficiency was thereby hindered. It was proposed to reduce the number of delegates at future conventions by one half or more. Definite action on this measure was deferred until the 1928 meeting. The important resolutions committee consisted of over fifty members, which made it possible for a local newspaper reporter to slip in unnoticed and to publish advance information regarding the work of the committee. This resulted in giving the public an erroneous and harmful impression regarding a difference of opinion concerning one of the resolutions offered. In order to guard against a repetition of this unfortunate occurrence, future members of this committee may be required to show credentials before being admitted to its meetings.

The great number of visiting delegates taxed to the limit the capacity of Seattle's hotels. Headquarters were established at the Olympic, the city's largest and finest hostelry. It was estimated by one of the local newspapers that the visitors spent \$1,000,000 while attending the convention. The Chamber of Commerce made the most of the occasion. Many excursions and entertainments were provided for the visitors, including boat rides over Puget Sound and Lake Washington, through the \$5,000,000 government locks connecting the two bodies of water. The Japanese Chamber of Commerce, not to be outdone, put on a special entertainment and exhibit for the teachers' benefit.

The Seattle schools made an elaborate display of their work and staged in the University stadium one evening a great pageant, portraying natural features of the Northwest. Against an enormous background of mountains, the spacious natural stage was filled repeatedly with children representing forests, wild life, birds, flowers, butterflies, clouds, winds, mountains, snowflakes, and glaciers. In representing the latter, several thousand children, picturesquely garbed, made an impressive spectacle as they slowly marched across the wide field of the outdoor amphitheater, while colored searchlights played upon them and a high-school orchestra rendered appropriate music.

The opening session was held at Meany Hall, University of Washington, Sunday evening. The famous college choir of St. Olaf's, Minneapolis, entertained the visitors for three quarters of an hour with their wonderful singing, giving many a new conception of the power and beauty of the human voice. In the unavoidable absence of Bishop Hughes, of Chicago, speeches were made by Doctor Winship and President Blair, stressing practical curricula.

Other general sessions of the convention were held in the University stadium, Fifth Avenue theater, Methodist, Presbyterian, and Congregational churches. They were presided over by Francis G. Blair, head of the association, Mary McSkimmon, Sue M. Powers, Selden M. Ely, H. W. Foght, and Helen B. Shove, vice-presidents. Addresses of welcome were delivered by two prominent women officials: Bertha K.

Landes, mayor of Seattle, and Josephine C. Preston, Washington state superintendent of public instruction. Departmental meetings were held at the Chamber of Commerce, Olympic hotel, and at the Elks, Eagles, and Moose lodge rooms, also at the churches named.

The National Council of Education was addressed by several famous school people, including George D. Strayer, Columbia University; Susan M. Dorsey, superintendent of the Los Angeles schools; Homer H. Seerley, Iowa State Teachers' College; Harry Charlesworth, British Columbia Teachers' Federation. Progress in elementary- and high-school education was the principal theme considered.

The Department of Adult Education considered postgraduate schooling and immigration. A number of state supervisors and directors addressed the sessions of this important section of the association.

John J. Tigert, U. S. Commissioner of Education; J. A. Bexell, dean of the Oregon Agricultural College; William O. Proctor, Stanford University, were among the prominent speakers at the meetings of the Department of Business Education.

The classroom teachers' section was addressed by Mayor Landes of Seattle; Augustus O. Thomas, president of the World's Federation of Education Associations, and other speakers. A feature of the meetings of this section were ten three-minute talks on the benefits conferred upon teachers by boards of education.

Elementary and Secondary School Principals held several important separate sessions. Other meetings were held by the Kindergarten and Primary Educators, Lip-Reading Teachers, Music Instructors, and the Departments of Rural Education, School Health, Science Instruction, Social Studies, Visual Instruction, and Vocational Education.

Other conferences were held by the American Classical League, American Home Economics Association, Art Educators, Corrective Speech Teachers, School Superintendents, National Congress of Parents and Teachers, National Council of Administrative Women in Education; Geography, English and Modern Language Teachers; National League of Teachers' Associations, Secretaries of State Education Associations, National Vocational Guidance Association, School Garden Association of America, and Student Participation in School Government.

N. E. A. officers held several important business meetings, at which reports were made and considered and the work and policy of the association discussed. During ten years' efficient management by the present executive secretary, J. W. Crabtree, there has been a 2,000 per cent increase in membership, the present number being close to 175,000. The present annual income of the organization is over \$400,000. The chief item of expense is the printing and distribution of the official organ of the association. The annual convention costs \$8,000. Twenty thousand dollars was used to assist in defraying expenses of delegates attending the annual convention at Seattle. Only half as much will be needed to send delegates to Minneapolis, where the 1928 convention is to be held.

For two years a committee of one hundred educators has been working on a teachers' code of ethics, to be recognized as the profession's standard of service and relationship. Inquiries are to be sent to 4,000 representative educators during the coming year, in order to gain a more comprehensive teachers' viewpoint. The questions propounded relate to the breaking of contracts, supporting educational organizations, accepting gifts from pupils, telling of pupils' personal deficiencies, using one position to get a large salary in another, and similar subjects.

Another committee is working on a plan to provide national or state homes for elderly teachers. It is pointed out that this movement is in the interests of school children, as well as teachers, because it will facilitate the retirement of worn-out instructors and their replace-



CORNELIA S. ADAIR,
President, N. E. A.,
Richmond, Va.

ment by younger, abler workers. An effort is to be made to secure laws which will permit the use of donations for teachers' homes and similar purposes, regardless of the conditions named by donors, who often place such testamentary restrictions upon their gifts as to render impossible the latter's profitable utilization.

Miss Cornelia S. Adair, of Virginia, was unanimously elected president of the association for the ensuing year. Eleven vice-presidents were chosen, as follows:

A. T. Allen, North Carolina; Ira T. Chapman, New Jersey; A. G. Crane, Wyoming; Florence M. Hale, Maine; R. L. Jones, Tennessee; John H. Rae, Idaho; Agnes Samuelson, Iowa; Claude W. Sandifur, California; H. A. Senter, Nebraska; John S. Vaughn, Oklahoma; J. O. Webb, Texas.

Henry L. Smith, of Indiana, was reelected treasurer, and Miss Kate B. Wofford, of South Carolina, was made a member of the board of directors, to fill the places left vacant by Miss Adair's elevation to the presidency. Frank E. Reynolds was elected a member of the Ohio executive committee.

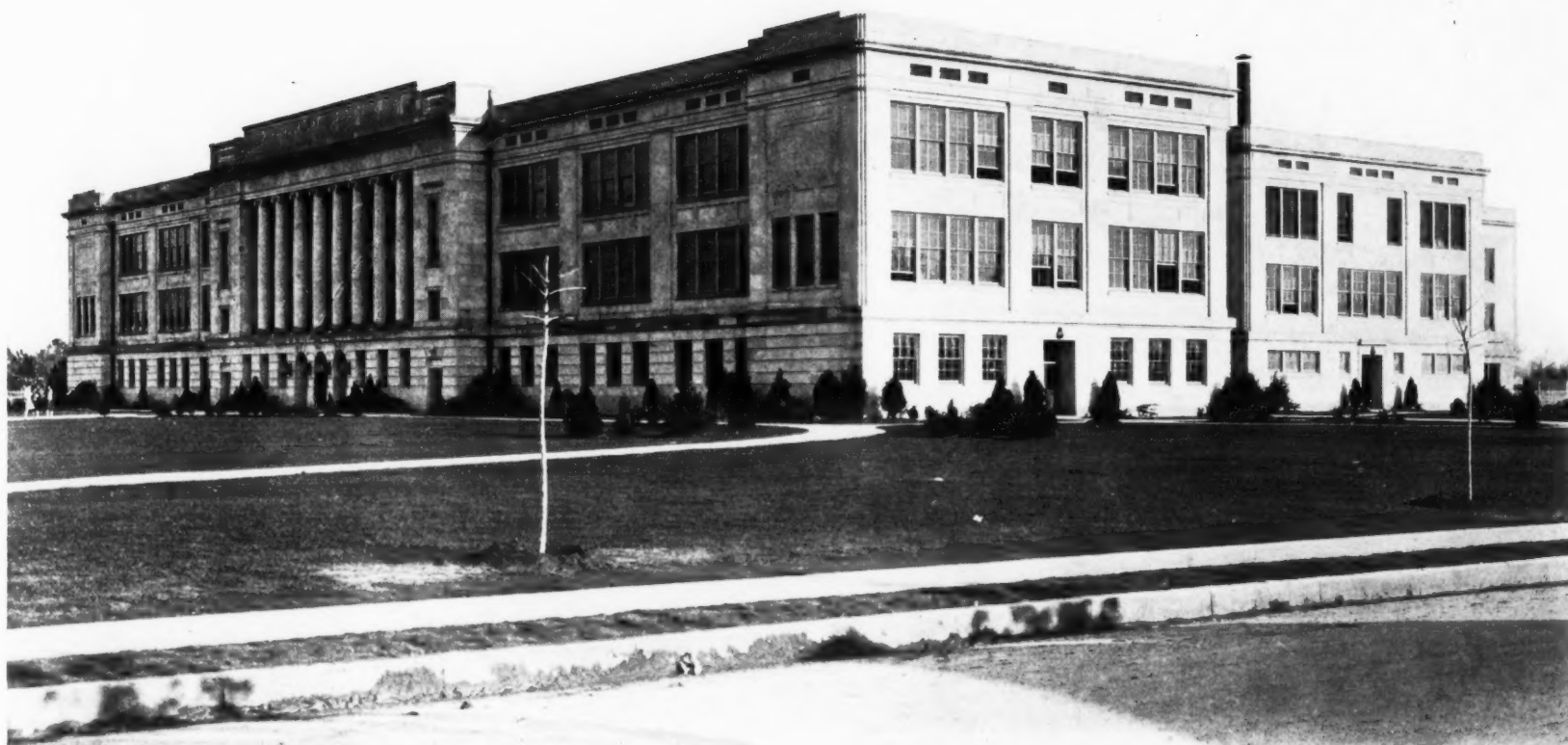
The new N. E. A. head has taught for 22 years and is now an instructor in the Richmond junior-high school. She has had higher positions offered her, but prefers to work with children of the adolescent age. She holds executive positions in fifteen organizations. She was instrumental in securing equal pay for men and women teachers in Virginia and the privilege of teachers to sit in council with superintendents and school boards. The Virginia teachers' retirement fund was sponsored by her. She lives with her mother and is buying a home, which she expects to have paid for in 1932, when she looks forward to buying an automobile. Her favorite hobby is gardening. She leads a very active life and nearly always is happy and smiling.

The convention adopted a program, which includes the training of teachers at least four years beyond high school; salaries commensurate with the cost of training and commensurate with the importance of service rendered; tenure during continued efficiency and a retirement fund supplied both by the public and the teachers themselves; reestablishment of teacher-pupil relation; educational and vocational guidance; special classes and special opportunities for subnormal, physically-handicapped and delinquent; opportunities for general culture and vocational training for adults and young people engaged in productive work.

Other adopted resolutions are as follows:

The administrative and supervisory local unit should be large enough to justify the employment of men and women with special training in educational leadership, administration, and supervision of instruction. Outside of cities, this unit should be larger than the district or township.

(Concluded on Page 188)



BOLTON HIGH SCHOOL,
ALEXANDRIA, LA.

Favrot and Livaudais, Architects,
New Orleans, La.

A Southern High School of Distinction

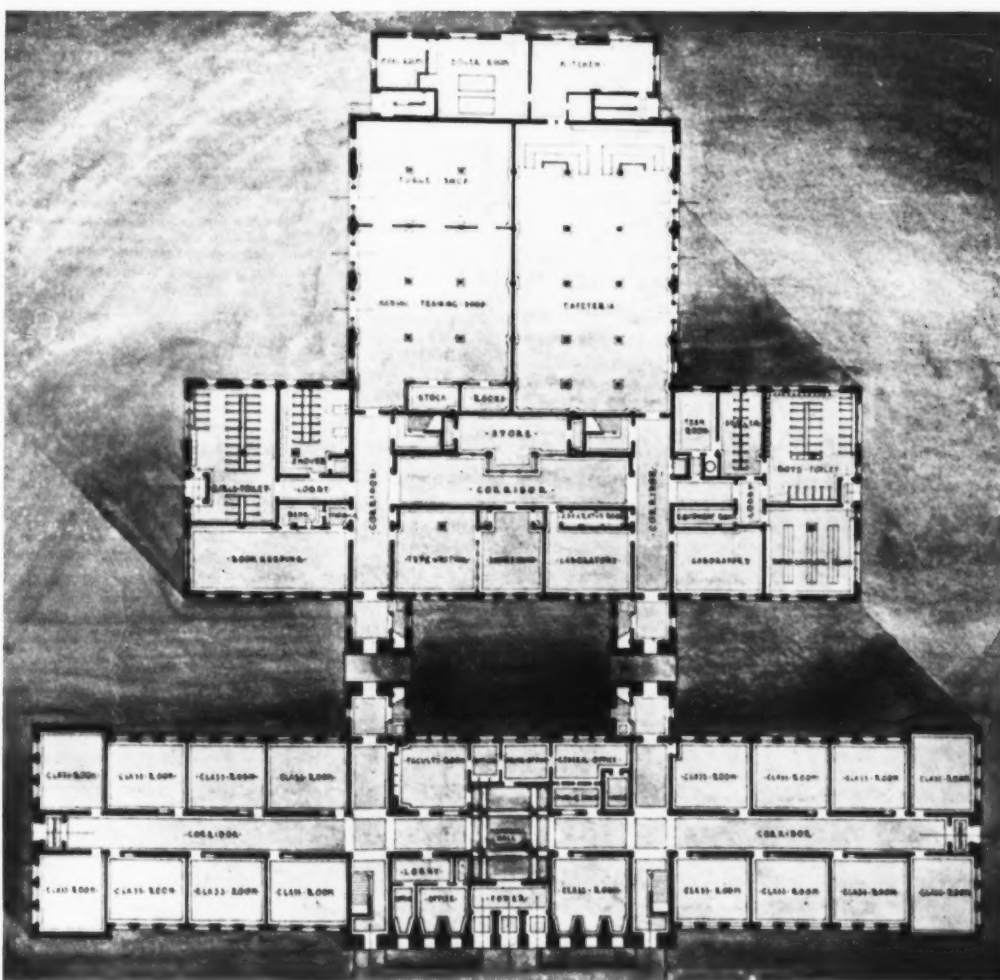
The Bolton High School

The million-dollar-high school at Alexandria, Louisiana, named for Mr. J. W. Bolton, who has been president of the Rapides Parish school board for the last eleven years, is considered one of the finest structures in the Southland, and was dedicated in November, 1926. In the words of State Supt. T. H. Harris, "the high-school plant arouses a wholesome public sentiment in favor of education and it represents also wise leadership through which the people's interest in the welfare of the children has been capitalized." The Bolton High School has an enrollment of 880 students and a faculty of 47 teachers, all of whom are graduates of standard colleges.

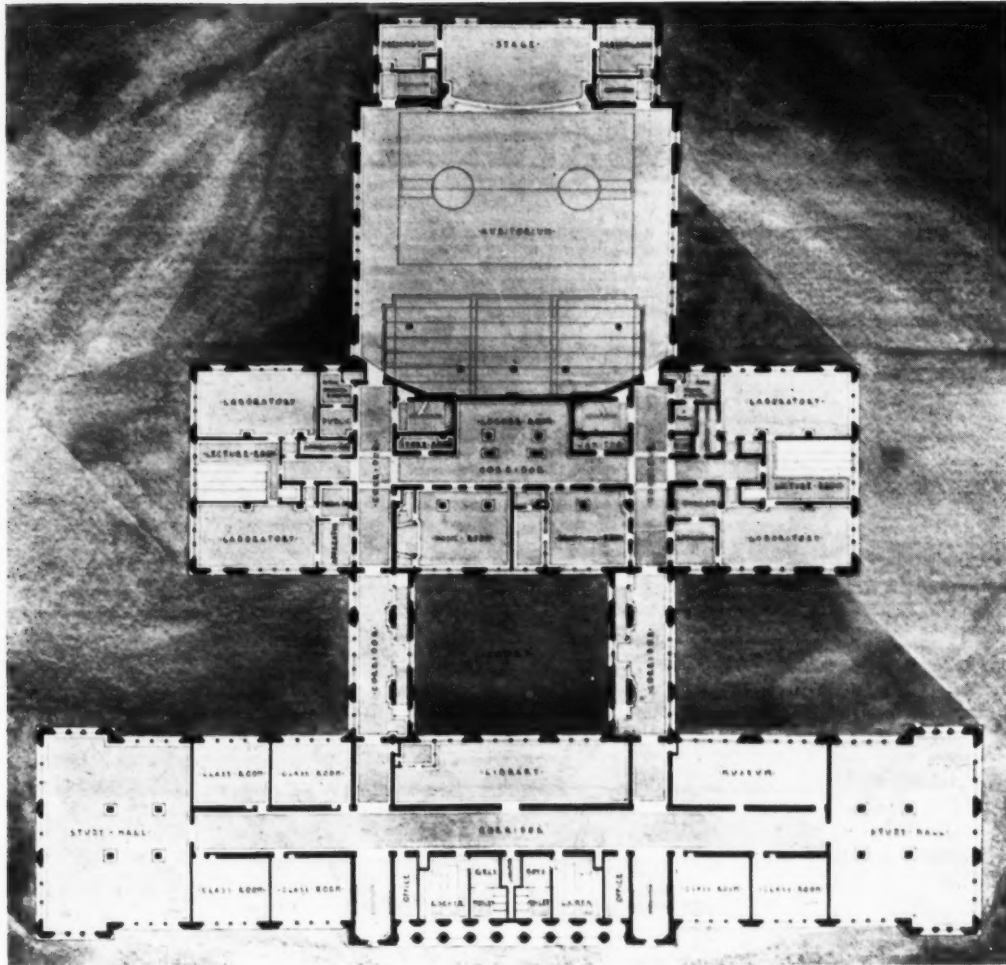
In the preparation of plans for the erection of the new high-school building, the Rapides Parish school board was not content to look at the accomplishments of other school systems, but immediately called in a number of educational experts with whom it discussed the details of plan and construction, such as location, arrangement, and adaptability to the purposes of the community. After the preliminary sketches had been prepared by the architects, copies were obtained and sent out for criticism and changes and rearrangements were made until each problem had been properly approached and all needs for instructional facilities had been satisfied.

In presenting the new building to the city and the state, the board was of the opinion that it was presenting a workshop of efficiency and convenience, dedicated to the cause of education, and the like of which could not be duplicated in any community in the South.

The building consists of two connected units located on a plot of 60 acres, fifteen of which belong to the Rapides Parish school board, and 45 of which are temporarily the property of the



FIRST FLOOR PLAN, BOLTON HIGH SCHOOL, ALEXANDRIA, LA.
Favrot & Livaudais, Architects, New Orleans, La.



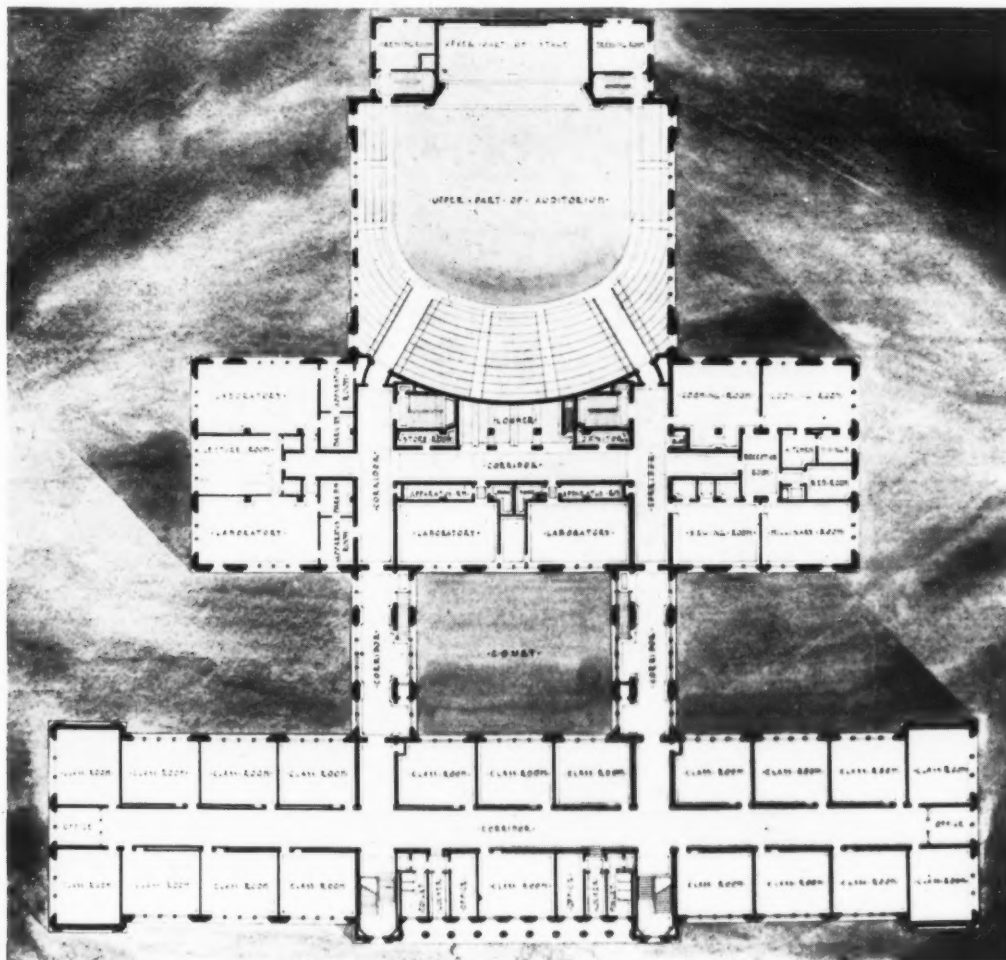
SECOND FLOOR PLAN, BOLTON HIGH SCHOOL, ALEXANDRIA, LA.
Favrot & Livaudais, Architects, New Orleans, La.

city of Alexandria. The building is set back from the main street about 200 ft., and is approached by two large concrete walks, which lead to the three entrances at the front.

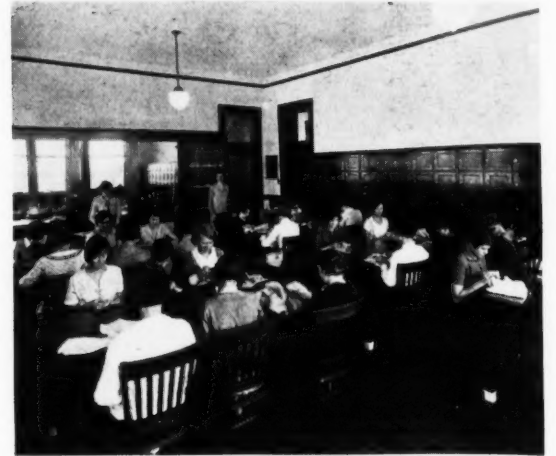
The School Grounds

Immediately back of the buildings is the athletic field, which consists of a gridiron, a

stadium, a track, a baseball diamond, etc. The field is intended to meet community needs for a playground and athletic field. A screen of evergreen planting is set directly inside a woven-wire fence which encloses the entire area. In the space allotted to a permanent stadium, there have been erected temporary wooden



THIRD FLOOR PLAN, BOLTON HIGH SCHOOL, ALEXANDRIA, LA.
Favrot & Livaudais, Architects, New Orleans, La.



SEWING ROOM OF THE BOLTON HIGH SCHOOL, ALEXANDRIA, LA.

bleachers which will serve until the permanent structure has been erected. Parking space for 160 automobiles is available through a driveway leading beneath archways which join the two building units. The parking space is in itself a garden spot. The arrangement permits students and faculty members to reach the school and gain admittance at the rear of the first unit without being subjected to the weather.

The Academic Building

The first building is the academic building which is 310 ft. long and 68 ft. wide. Three entrances in front open into the foyer and from this foyer access is had to a large central memorial hall. The latter has a mosaic-paneled terrazzo floor, with marble borders and travertine wainscot 7 ft. high, above which the walls are finished in imitation travertine, with plastered cornices and ceiling. The front-entrance doors are covered with bronze in keeping with the design of the exterior of the building.

The Administrative Offices

Surrounding the memorial hall are the offices of the principal, the administrative offices of the school, the faculty room, and the assistant-principal's office. All of these rooms are conveniently arranged to serve the public in the shortest time. The balance of the first floor is divided into seventeen classrooms for general purposes.

The Second Floor

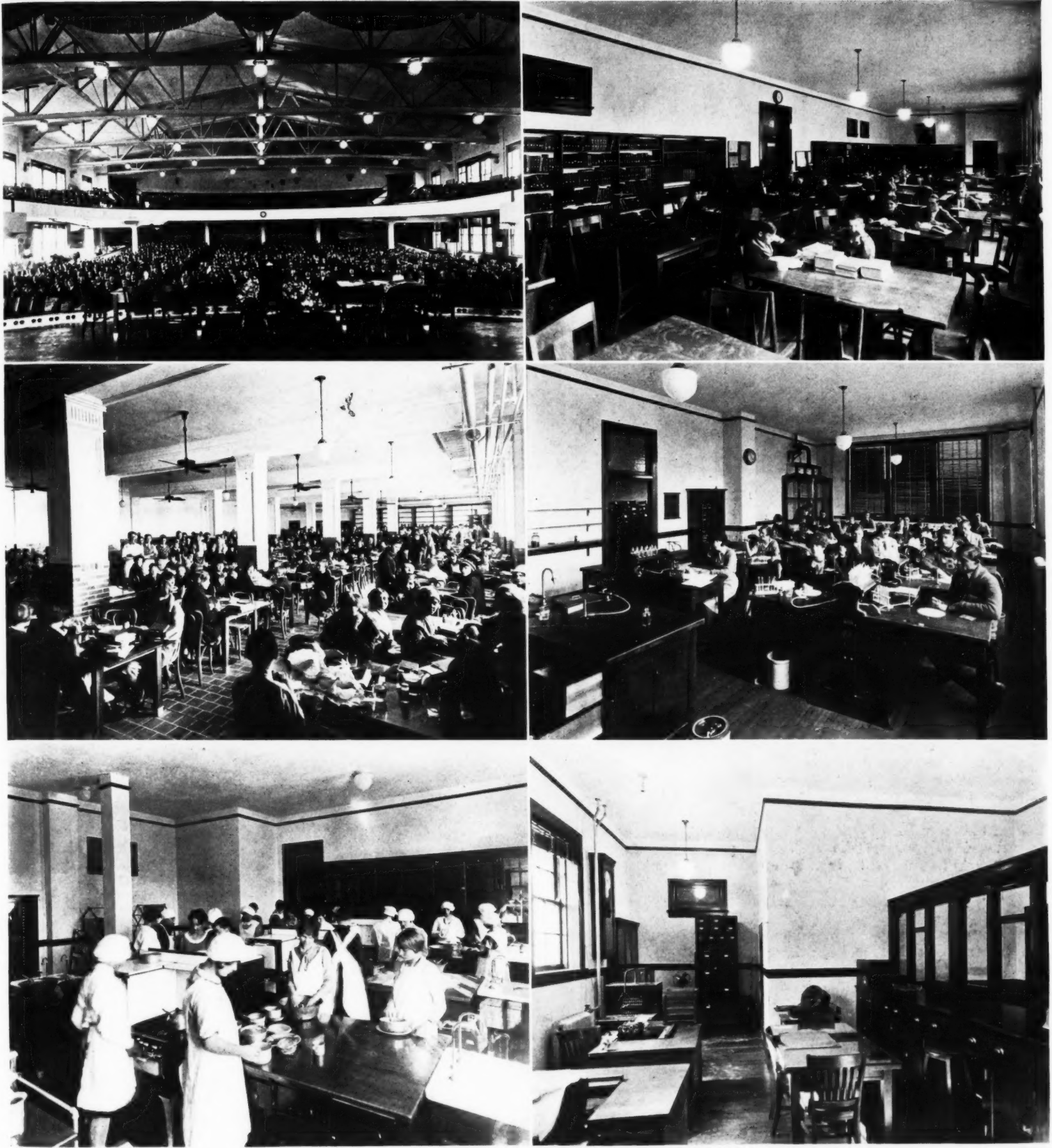
The second floor is approached from the main corridor which has two 5-ft. stairways of ornamental iron. On this floor are located the library, the museum, two large study halls, six classrooms, a private office for the teachers, locker rooms, and toilets. The third floor is given over to 20 classrooms, four teachers' offices, and toilets for the teachers. Between the first and second floors are located a series of locker rooms for students' use.

The Science Building

From the academic building two stairways lead to the science building which is in the rear.



PRINCIPAL'S OFFICE OF THE BOLTON HIGH SCHOOL, ALEXANDRIA, LA.



INTERIOR VIEWS OF THE BOLTON HIGH SCHOOL, ALEXANDRIA, LA.
 TOP: Auditorium-Gymnasium and Library; CENTER: Cafeteria and Chemistry Laboratory; BOTTOM: Cooking Room and General Office.

These corridors are 20 ft. wide, and each contains a staircase of ornamental iron, leading from the ground floor to the third floor. The passageways are 59 ft. long and serve as a portecochere. A driveway extending underneath the passageway permits automobiles to receive and discharge passengers in inclement weather. The passageways afford a large and ample court between the two wings of the building and have direct connection with the science building.

The science building is 199 ft. long and 155 ft. wide. On the first floor are located the commercial department with shorthand rooms, typewriting rooms, and bookkeeping rooms. The balance of the space facing the court is occupied by two laboratories for scientific purposes.

On the left of the corridor are the girls' toilet rooms, shower, and locker rooms. On the right are the boys' toilet rooms, shower, and locker rooms, special rooms for the teamwork of the school, and the equipment room. In the main corridor is located the bookstore.

Two staircases lead from the first to the third floor of the science building to give access to all parts of the building. On the right to the rear is located a fully equipped cafeteria, with tile floors, proper refrigerating units, and a kitchen for preparing the food. On the left in the rear of the building is the manual-training department which is fitted with the most modern equipment.

In the rear of the manual-training department is the boiler room with the mechanical equipment, hot-water system, main switchboard, transformers, and fuel rooms.

On the second floor of this building the passageways connect again with the academic building as on the first floor. On the left of this floor are found the biology laboratories and lecture room, and on the right are the physical laboratories and a lecture room. In the center are the drafting and crafts rooms, and adjoining them is the music room.

The balance of the second and third floors of this building is taken up with the auditorium with a seating capacity of 2,554. The audi-

(Continued on Page 157)



BOARD ROOM, ASBURY PARK HIGH SCHOOL, ASBURY PARK, N. J.

Ernest A. Arend, Architect, New York, N. Y.

THE ASBURY PARK JUNIOR-SENIOR HIGH SCHOOL

The junior-senior high-school building at Asbury Park, N. J., is located on a three-and-one-half-acre tract. At the rear of the building there is a fine community athletic field of eleven and one-half acres bordering on Deale Lake. The field has been laid out with a running track, football gridiron, baseball diamond, and tennis courts. It will eventually include a concrete stadium to accommodate 6,000 persons.

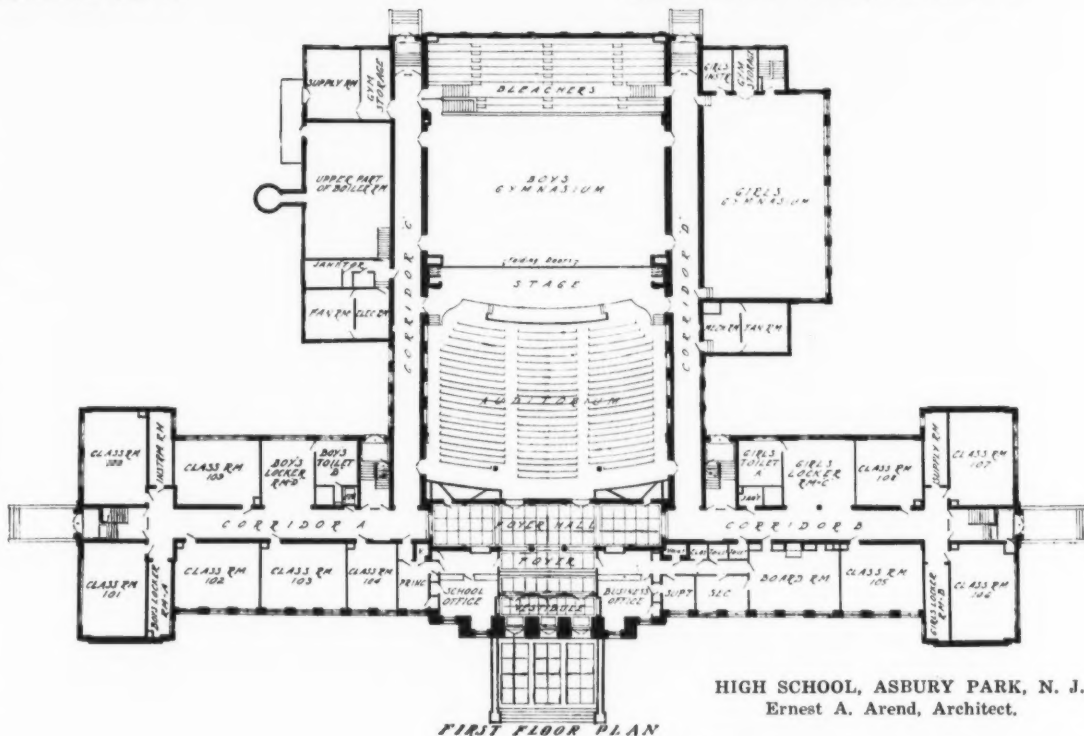
Special Exterior Features

The building comprises east and west pavilions, constructed in brick in an ornamental diaper pattern, set in limestone frame, which is carved and embellished at the top with a shield bearing the inscription "strive." The south portico, which is 79 ft. wide, is also built of limestone. There are three main entrance doorways. The north elevation, which is the main gymnasium section, has east and west corridor entrances of limestone, with pilaster wall treatment and fenestration conforming to the general architectural design of the façade of the main building. The design is also carried out in the main entrance, the vestibule, the foyer and foyer hall, and the auditorium. In the vestibule the walls and door trim are of Botticino marble, with plastered ceiling, terrazzo floor and floor borders, and panels of Tennessee marble. Bronze is used for the main entrance doors and for the transom and radiator grilles.

The Construction of the Building

The building is built on a concrete foundation and all floors, walls, and partitions are of fire-proof construction. The corridors and stairways have a vitrified, glazed tan-brick wainscoting. Duraflex floors are found in all the corridors and in the offices. Drinking fountains set in Vermont marble recesses are provided in the corridors on each floor.

The classrooms are fitted with teachers' cabinets and bulletin boards. Blackboards are located on the wall sides of the rooms, with cork-board display panels over each. An inter-

HIGH SCHOOL, ASBURY PARK, N. J.
Ernest A. Arend, Architect.

communicating telephone system has been installed, as well as a program clock, and a fire-alarm system.

The Main Building

The main building, which contains facilities for all the classrooms, is a three-story structure. It is 317 ft. across the front and has been so planned that the two end wings may be extended, providing additional classrooms for the future. The building is in the classic style of architecture, with the details taken from the Italian Renaissance. The general construction is of a good grade of face brick harmonizing with the buff limestone trimming on the cornices, band courses, sills, pilaster caps and bases, and parapet copings. The ornamental iron panels between the pilasters under the third-story windows are painted to simulate old

LIBRARY, ASBURY PARK HIGH SCHOOL,
ASBURY PARK, N. J.



ASBURY PARK HIGH SCHOOL,
ASBURY PARK, N. J.

Ernest A. Arend, Architect,
New York City, N. Y.

bronze. There is no repetition of detail in any part of the building as is often found in school buildings.

The Foyer and Foyer Hall

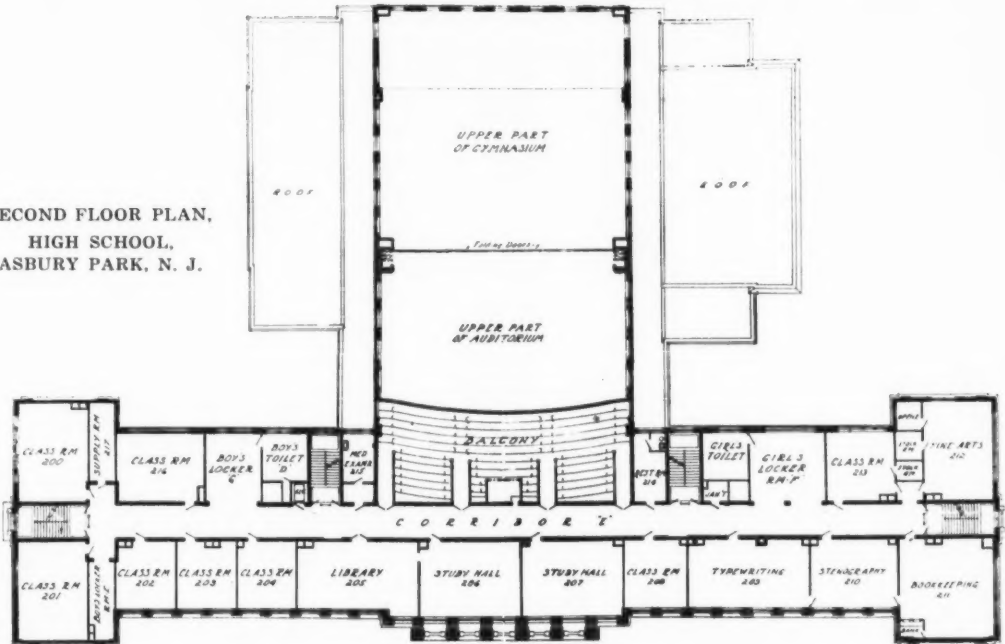
The foyer and foyer hall have pilasters and columns of Botticino marble, with terrazzo flooring, and borders, step, and panels of Tennessee marble. The ceiling is in decorative plaster with an antique ivory finish. The wainscoting is of Botticino marble 5 feet high, with artificial stone finish above it.

West of the foyer is the general school office, the principal's office, the school-board office, and a vault for the school records. East of the foyer is the general office of the board of education, the private office of the superintendent of schools, the board room and office of the secretary, together with vault, toilets, clothes and supply closets.

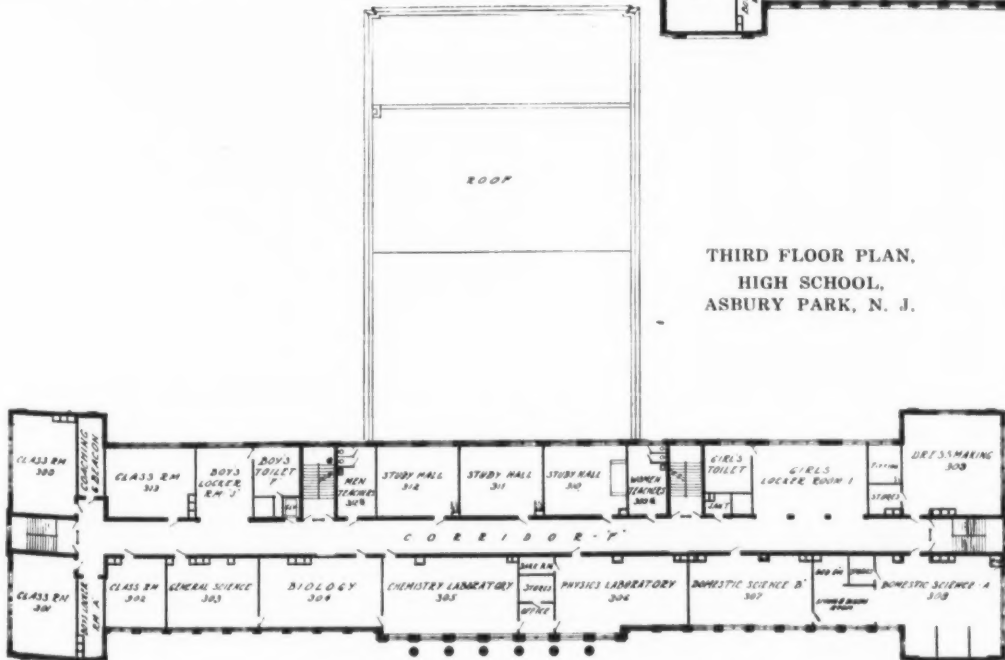
The Auditorium

The auditorium has a balcony and is equipped with 1,152 opera chairs. It is provided with a

SECOND FLOOR PLAN,
HIGH SCHOOL,
ASBURY PARK, N. J.



THIRD FLOOR PLAN,
HIGH SCHOOL,
ASBURY PARK, N. J.



motion-picture booth and screen, and a stage with a disappearing footlight system, scenic drops, velour drape and side curtains, and accessories for all forms of school programs and entertainments. The walls of the auditorium under the windows and balcony are finished in artificial marble, with Botticino marble for the base and subbase. The entire auditorium and balcony, the ornamental ceiling, and proscenium arch, have been decorated in antique ivory. In the six decorative panels over the top of the arch are engraved the words: Honor, courage, loyalty, truth, virtue, and wisdom. Five large windows on each side afford adequate illumination. These windows which are an architectural feature, are draped with velour, and are equipped with an automatic opening and closing device and Venetian blinds which fit into pockets over the windows when not in use. In the stage-gymnasium plan which has been followed, an effort has been made to obtain a clear, unobstructed view of the gymnasium from all

parts of the auditorium. The proscenium arch is 70 ft., 2 in. wide and 20 ft. high, with built-in pockets at each side to contain the stage curtains and folding doors separating the gymnasiums from the auditorium.

The School-Board Room

The board room is 20 by 30 ft., and contains an open fireplace with facing and hearth of Belgian black-and-gold marble. The wainscoting is quartered-oak paneling, which extends 7 ft. 6 in. high and is finished in walnut color. The walls over the wainscot are glazed in imitation leather effect, while the ceiling and the cornice are in antique ivory. The floor is finished with Durallex.

The Gymnasiums

The building contains space for two gymnasiums. The boys' gymnasium is 47 by 80 ft., with built-in bleacher capable of seating 375 persons. In the bleacher section there is a well-lighted boys' locker room 25 by 38 ft. with locker and shower rooms, toilets, instructor's room, visiting-team room, and exits to the athletic field. The walls are finished in vitrified, glazed tan-brick wainscoting 7 ft. high, and buff brick up to the ceiling. A stairway connects the locker rooms with the gymnasium and bleachers above. The girls' gymnasium is 40 by 68 ft., and has adjoining it an instructor's room, storage room, and a stairway leading to the locker room below. In the basement are located the girls' locker rooms containing 48

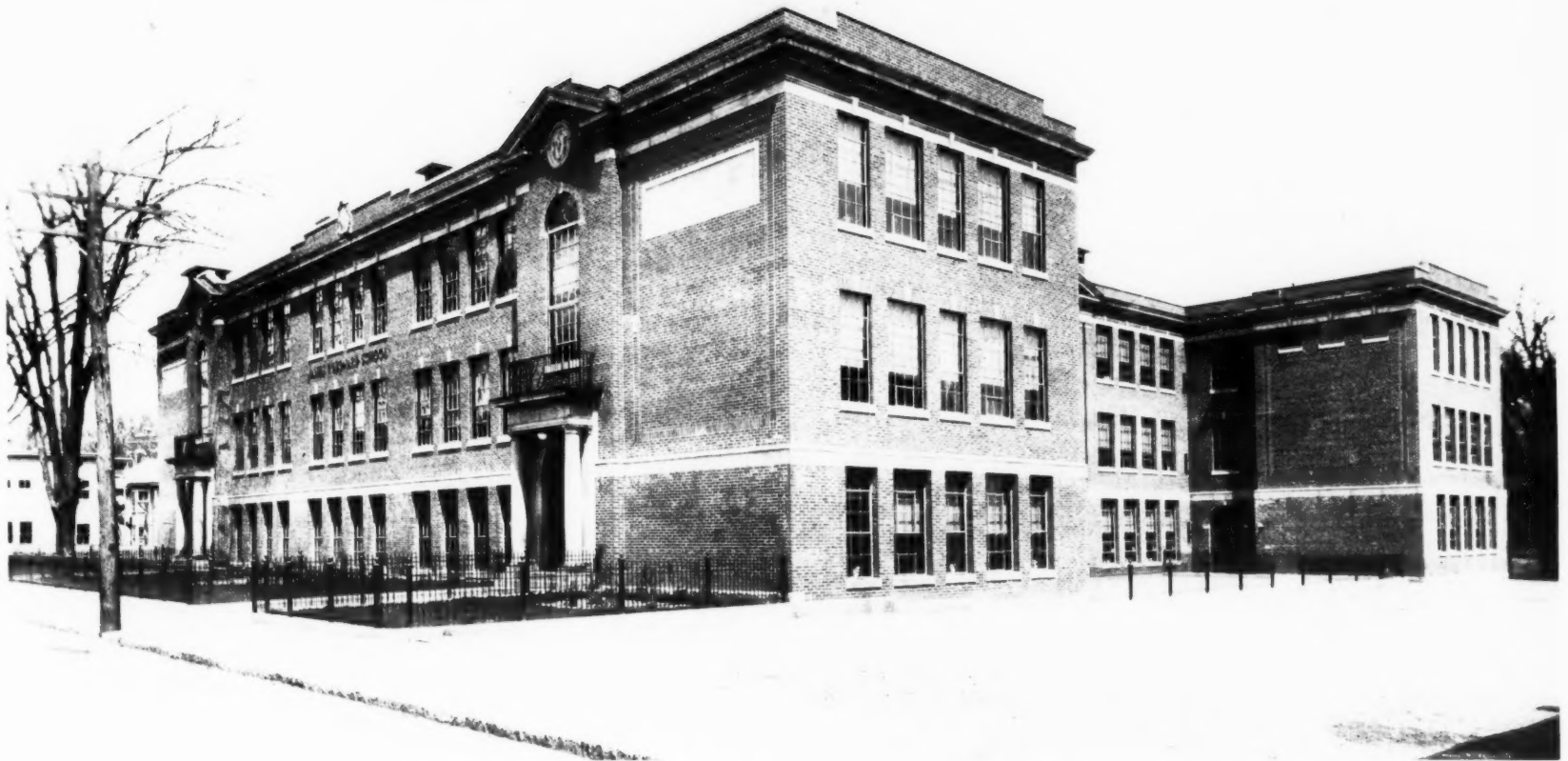
(Continued on Page 158)



ENTRANCE DETAIL, ASBURY PARK HIGH SCHOOL, ASBURY PARK, N. J.
Ernest A. Arend, Architect, New York, N. Y.



INTERIOR VIEWS OF THE ASBURY PARK HIGH SCHOOL AT ASBURY PARK, N. J.
TOP: Auditorium and Boys' Gymnasium; BOTTOM: Cafeteria and Chemistry Laboratory.



JAMES F. LEONARD ELEMENTARY SCHOOL,
LAWRENCE, MASS.

AN ECONOMICAL FIREPROOF SCHOOL- HOUSE

The Leonard School at Lawrence, Mass.

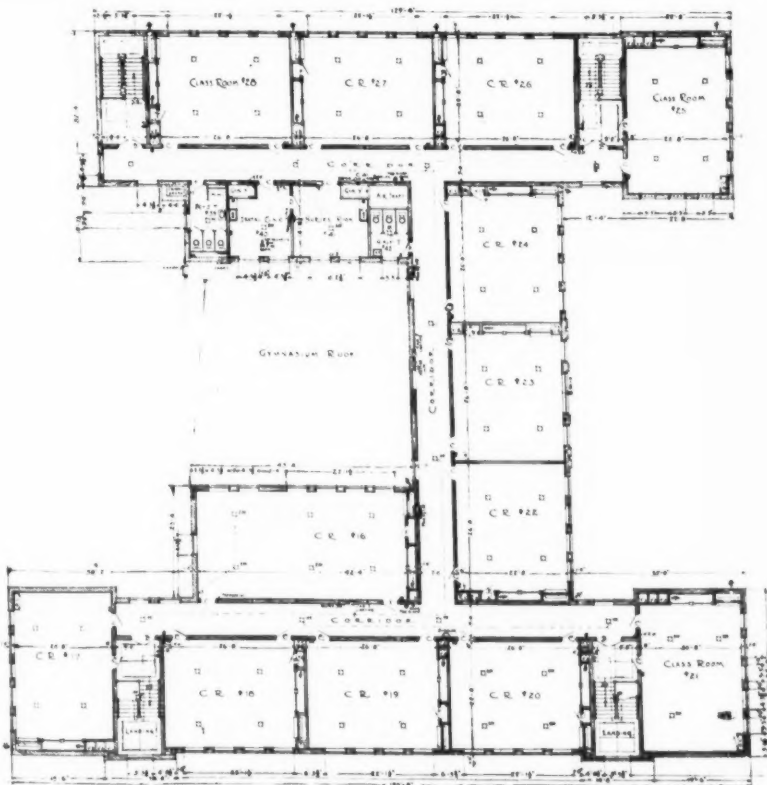
The new James F. Leonard Elementary School for the City of Lawrence, Mass., is located on Allen Street in the midst of a foreign population. It accommodates 1,190 pupils, 120 of which are kindergarten children and 1,070 are pupils in the first to the fifth grades. The building also contains a combination assembly hall and gymnasium for school and community use. The room will seat 576 people.

The building has a frontage of 259 ft. and a depth of 180 ft., is of fireproof construction with red-brick exterior and limestone trim.

Playgrounds on either side of building con-

tain altogether 62,430 sq. ft. bordering on the Spicket River and having many beautiful trees. The kindergarten playgrounds are on the south side of the building and are enclosed with

Ashton, Huntress & Alter, Associate Architects,
Lawrence, Mass.



SECOND FLOOR PLAN, JAMES F. LEONARD ELEMENTARY SCHOOL,
LAWRENCE, MASS.

Ashton, Huntress & Alter, Associate Architects, Lawrence, Mass.

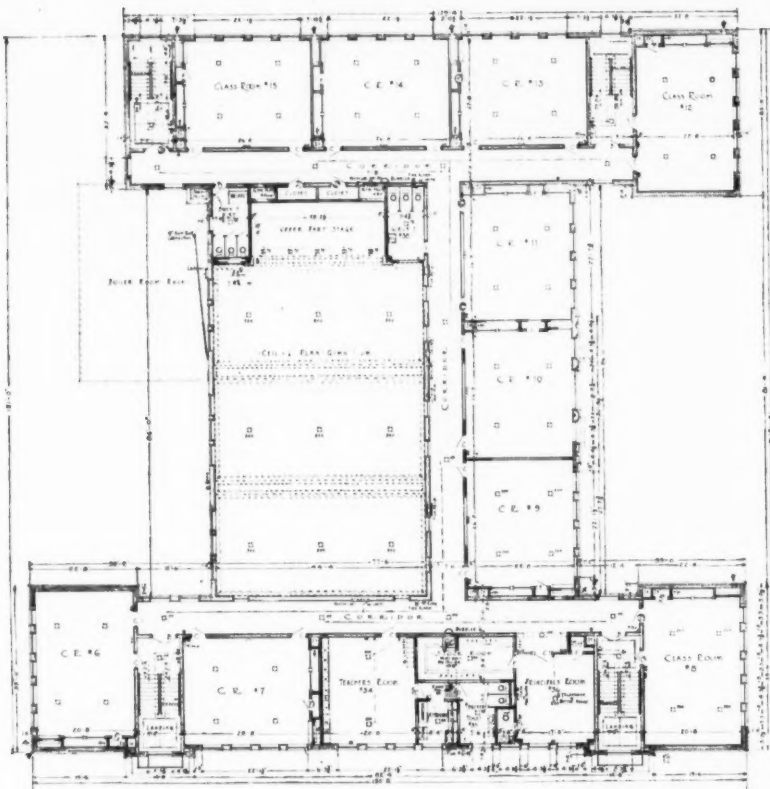


ENTRANCE DETAIL OF THE JAMES F. LEONARD ELEMENTARY SCHOOL,
LAWRENCE, MASS.

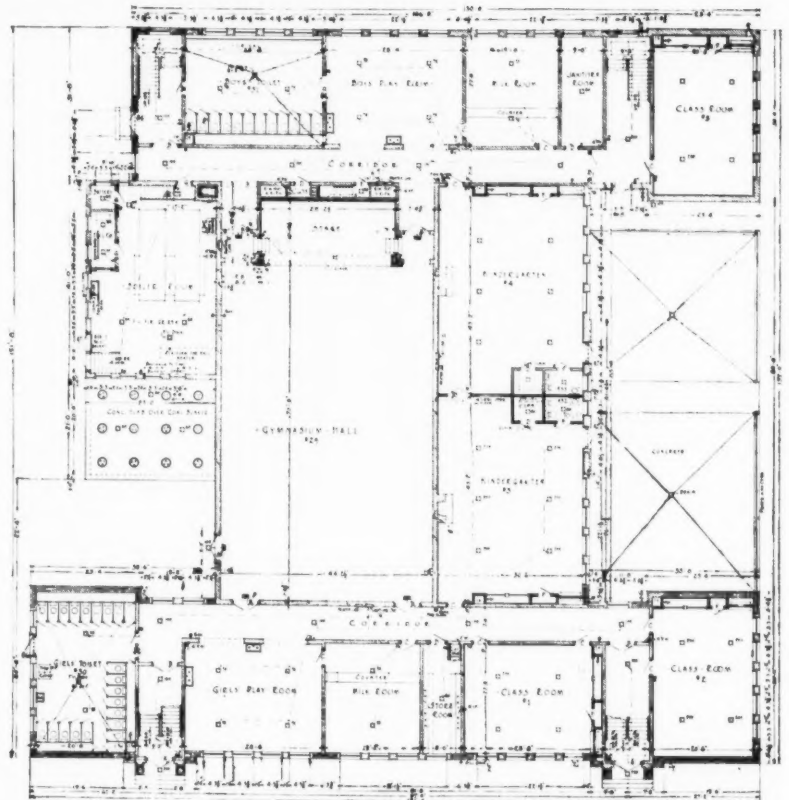
Ashton, Huntress & Alter, Associate Architects, Lawrence, Mass.



CLASSROOM INTERIORS OF THE JAMES F. LEONARD ELEMENTARY SCHOOL, LAWRENCE, MASS.
Ashton, Huntress & Alter, Associate Architects, Lawrence, Mass.



FIRST FLOOR PLAN, JAMES F. LEONARD ELEMENTARY SCHOOL,
LAWRENCE, MASS.



GROUND FLOOR PLAN, JAMES F. LEONARD ELEMENTARY SCHOOL,
LAWRENCE, MASS.

an iron fence and entered directly from the classrooms. The areas at the front of the building are enclosed with an iron fence and planted with shrubs and evergreens.

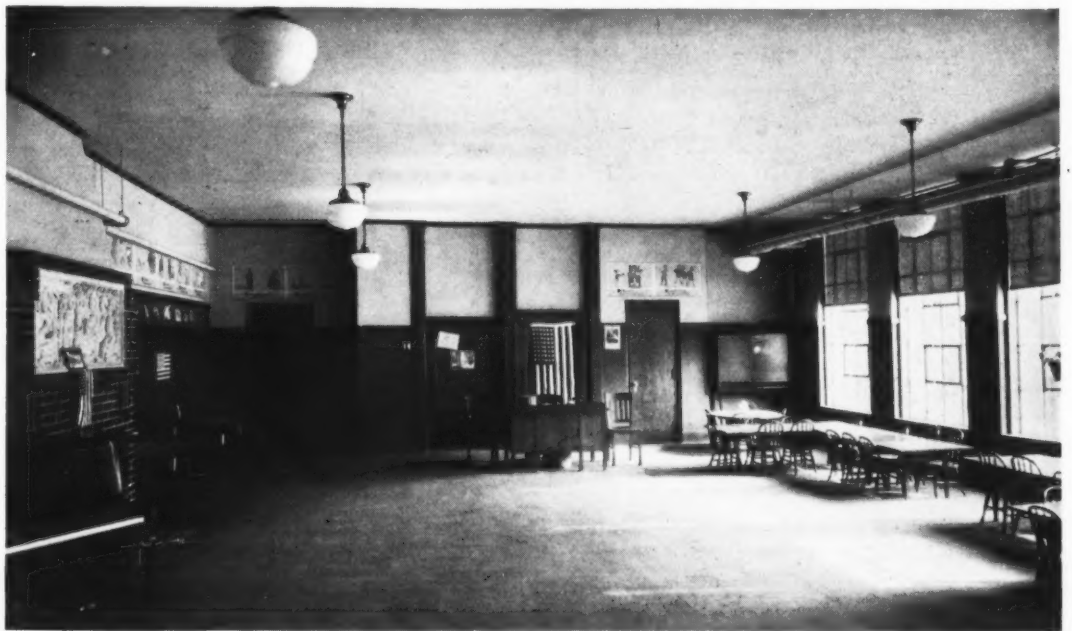
The interior walls of basement corridors, toilet rooms, and all stair wells are finished with buff salt-glaze tile; the balance of the building is plastered with hard plaster applied directly to walls and tinted with flat oil paint.

All corridors and classrooms have dadoes of burlap. These dadoes are five feet high in the corridors and extend up to the blackboards in the classrooms, and are painted. All classrooms have tackboards over the blackboards and large tackboards at rear of each room.

The wood finish throughout is of oak, doors are Roddis flush veneer with four light panels.

Stairs are of steel construction, with treads and landings filled with marble terrazzo. Corridor floors and base are of terrazzo, with brass dividing strips. Classroom floors in the first and second story are of rezilite, those on the ground floor, including the kindergarten, are of cork tile.

(Continued on Page 158)

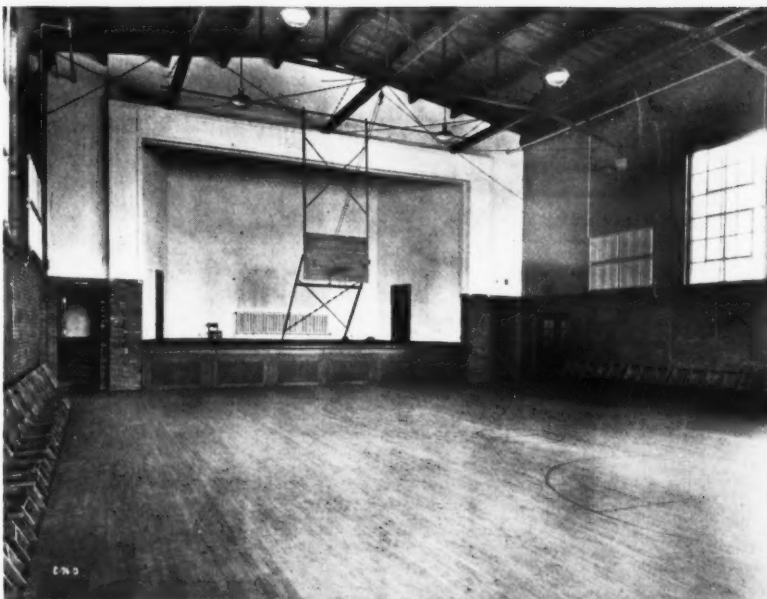


KINDERGARTEN ROOM AT THE JAMES F. LEONARD ELEMENTARY SCHOOL, LAWRENCE, MASS.
Ashton, Huntress & Alter, Associate Architects, Lawrence, Mass.



ELM HEIGHTS GRADE SCHOOL,
BLOOMINGTON, IND.

Alfred Grindle, Architect,
Bloomington, Ind.



INTERIOR VIEWS OF THE ELM HEIGHTS GRADE SCHOOL, BLOOMINGTON, IND.
TOP: The Auditorium-Gymnasium. BOTTOM: (Left) View of a Classroom Showing the Window Ventilators. (Right) A Stairway.

THE ELM HEIGHTS GRADE-SCHOOL BUILDING An Elementary Building with Window Ventilation

The new Elm Heights Grade School at Bloomington, Indiana, embodies some interesting features of plan and equipment. In the building of the school, no effort has been spared to give the city a building that will be pleasing in appearance, efficient, and safe for the occupants. Special precautions have been taken to make the building safe against fire and panic, and the sanitary arrangements are intended to meet modern demands.

The building practically stands on a solid stone foundation, the soil and grade conditions making this precaution against settling advisable. The school faces east on Faculty Avenue and is built in the Collegiate Gothic or modified Tudor style of architecture. The buttress bays on the east and west elevations form a natural tie; in addition to conforming to the architectural style, the buttresses have a tendency to add greatly to the life of the structure.

The structure is practically fireproof and is constructed of first-quality face-brick, with concrete base, and cut-stone trimming and carving. Steel casements are used in the central portion of the east front to relieve the remainder of the façade. The first and second floors, halls, corridors, and stairs are of fireproof construction. The ceiling of the second floor is suspended metal and lath-roof construction, with noncombustible, five-ply roof covering.

The building, which is two stories high, contains fourteen classrooms, with the usual administrative department, consisting of a principal's office, a waiting room, and a supply room. The first floor contains six classrooms, a health unit consisting of a waiting room, a consultation room, a toilet room and lavatory,



REAR VIEW, ELM HEIGHTS GRADE SCHOOL, BLOOMINGTON, IND.
Alfred Grindle, Architect, Bloomington, Ind.

and space for a lunchroom, an auditorium-gymnasium, and a janitor's room.

A girls' entrance is located at the south end of the building and a boys' entrance at the north end.

The second floor is given over to eight classrooms, a teachers' room, and toilets for boys and girls. Each classroom accommodates forty pupils and is equipped with an individual classroom wardrobe.

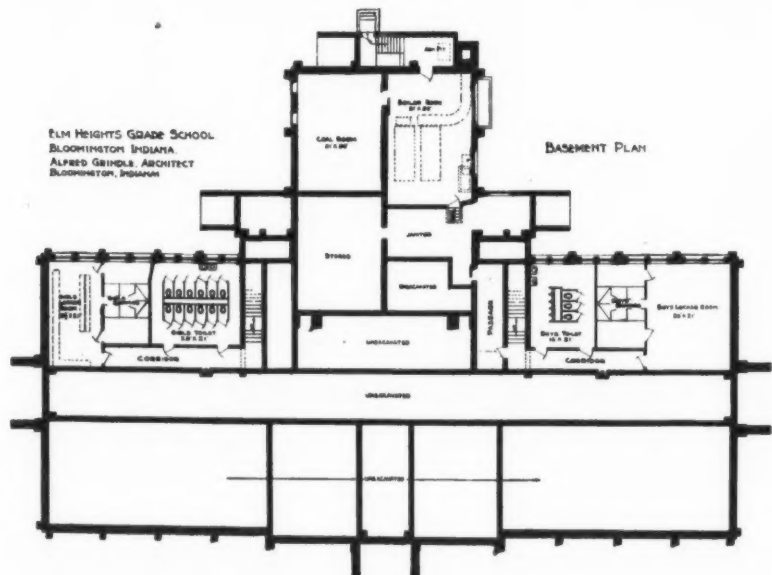
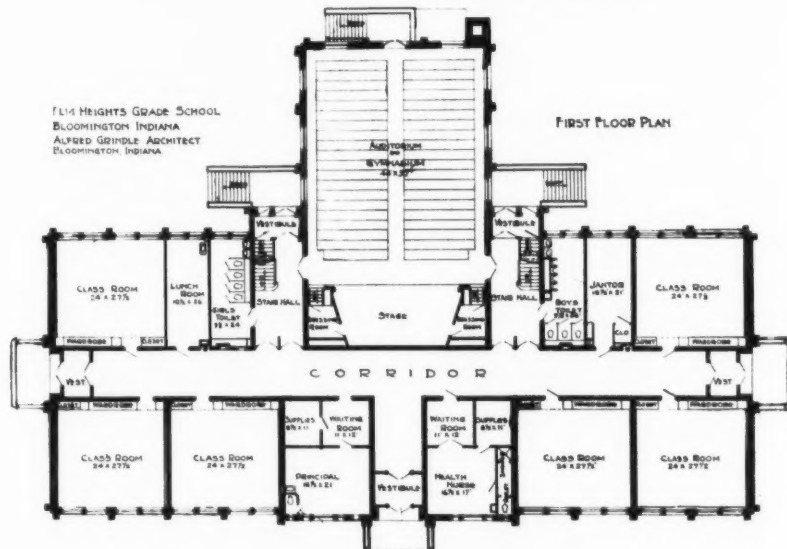
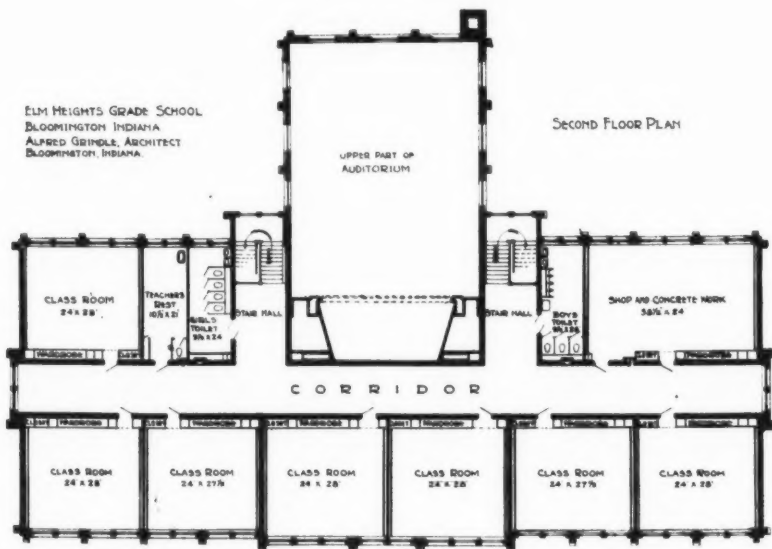
A teachers' restroom, a janitor's workroom, and a supply room are located on each floor, in addition to janitors' quarters near the boiler room in the basement. Toilet rooms are found in the stair halls in the central portion of the building and additional toilet rooms and showers are located in the basement. All toilets

are arranged on the outside walls and have window ventilation. Drinking fountains are placed in recesses in the corridors and exit doors are arranged to swing back against the wall, thus avoiding any obstruction in case of fire or panic.

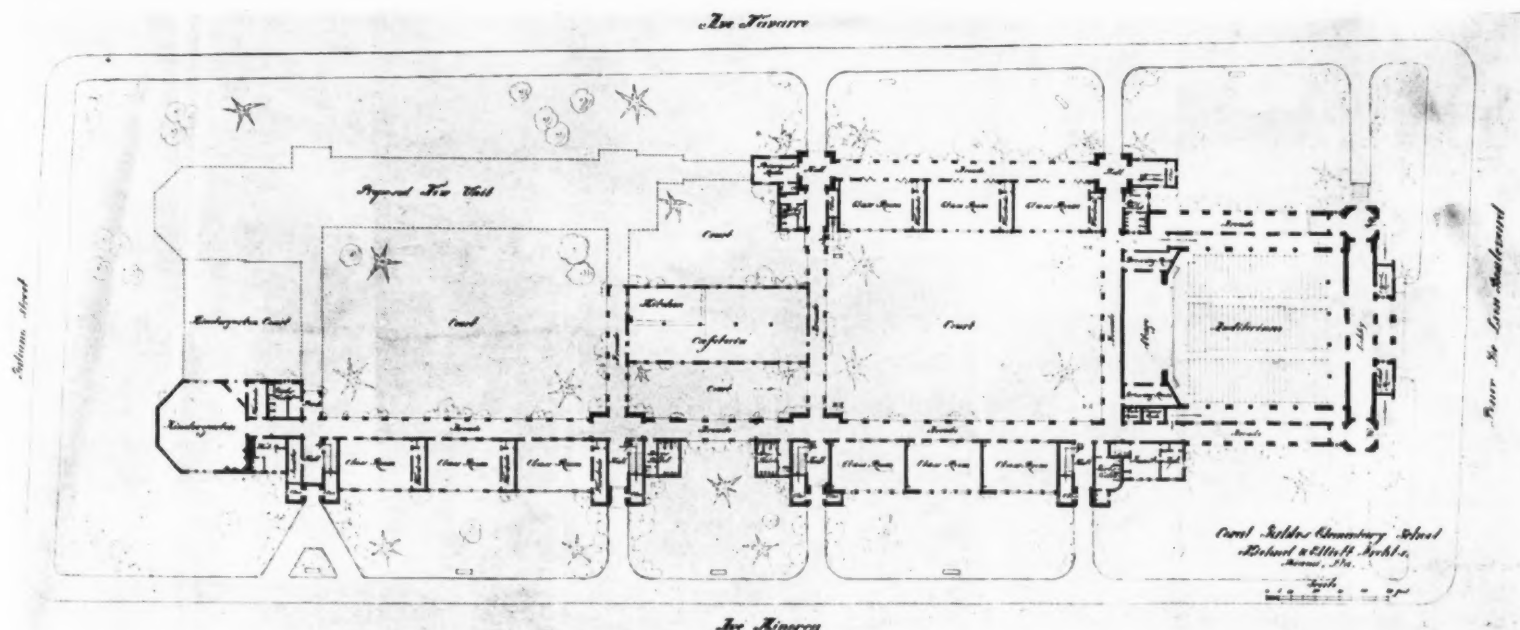
The auditorium-gymnasium is in the central rear portion near the stair halls. The room has a seating capacity of 450 persons and is equipped with a stage. Ample exits are provided; chair storage is arranged under the stage.

The boiler and fuel rooms, as well as the storage and janitor's room are located in the basement. This department is well located and is separated from the rest of the building by fire doors. Outside entrances to the basement and

(Concluded on Page 150)



END VIEW, ELM HEIGHTS GRADE SCHOOL, BLOOMINGTON, IND.
Alfred Grindle, Architect, Bloomington, Ind.

CORAL GABLES ELEMENTARY SCHOOL,
MIAMI, FLA.Kiehnel & Elliott, Architects,
Miami, Fla.

FLOOR PLAN, CORAL GABLES ELEMENTARY SCHOOL, MIAMI, FLA.

Kiehnel & Elliott, Architects, Miami, Fla.

A FLORIDA SCHOOL IN SPANISH DESIGN

George H. Dacy

One of the finest elementary school buildings in southern Florida is a structure of Spanish design. This handsome and substantial structure is something quite different in grade-school architecture for it has been developed as a Spanish style of construction best adapted to a tropical country. The majority of modern American schools north of freezing weather emphasize a dependable heating system as one of their outstanding assets. The Coral Gables institution, on the other hand, has been specialized in design so that it may capitalize the ventilating effects of prevailing breezes which aid in moderating indoor tropical temperatures.

A beautiful auditorium is a particular feature of this building of concrete, stucco, steel and tile. The auditorium, 150 by 100 ft. in floor dimensions, has a large balcony and a total combined seating capacity of 1,000. The room is free of pillars and posts so that all the seats command unobstructed views of the large stage. The lofty ceiling is ornamented with white beams and a decorative border of stucco in grille formation. The concrete floor is inclined so that the rear rows of seats are elevated two to three feet higher than the front seats.

The grade school auditorium is a double pur-

CORAL GABLES ELEMENTARY SCHOOL,
MIAMI, FLA.Kiehnel & Elliott, Architects,
Miami, Fla.

pose hall for, in addition to being used as the central meeting place of the pupils, it serves in the evenings as a community center for the city.

This elementary school of 26 rooms was built in three separate units at a total cost of \$300,000 and serves the educational requirements of 950 pupils. Each schoolroom accommodates 40

children and is so arranged that it is favored with a complete circulation of air. The entire building might be appropriately called an "open-air school" for both sides of the building are practically open.

Three of the units and the cafeteria building inclose a central patio or courtyard. The patio is 100 by 120 ft. in extent and is adorned with turf and flower beds bordered with coral rocks. The windows which extend from floor to ceiling of one unit overlook this patio while the open colonnades of another unit command a similar view.

The two-storied units surround the patio on three sides. The width of the building is 32 feet and is equivalent to the width of one of the typical classrooms and its contiguous corridor or colonnade. You can readily understand in consequence of its architectural layout how each room is exposed to complete ventilation. The school is built so that its sides are exposed directly to the sweep of the prevailing winds.

The school building has no basement but the foundation walls are set directly on the coral rock which underlies the entire site.

The cafeteria, a separate building linked to the schoolrooms by covered corridors, is 50 by 34 ft. in size and provides essential kitchen and dining accommodations for the 500 children who eat there every school-day noon. The cafeteria is operated on a cost basis by the parent-teacher association.

The Spanish tile used in constructing the roof of this school were imported from Spain.



CORAL GABLES ELEMENTARY SCHOOL,
MIAMI, FLA.

Kiehnel & Elliott, Architects,
Miami, Fla.

Many of them are 100 to 300 years old, having been salvaged from palaces, convents, and public buildings which have been razed during recent years in Madrid, Barcelona, Granada, and other cities of Spain. A roof made of these convex and concave tile so fastened together to provide for air circulation is reputed to be the coolest and most durable which can be constructed in a tropical country. Furthermore, one of these tile-crowned roofs which has been weathered

and colored by the tests of time is an ornament which adds to the architectural excellences of the building.

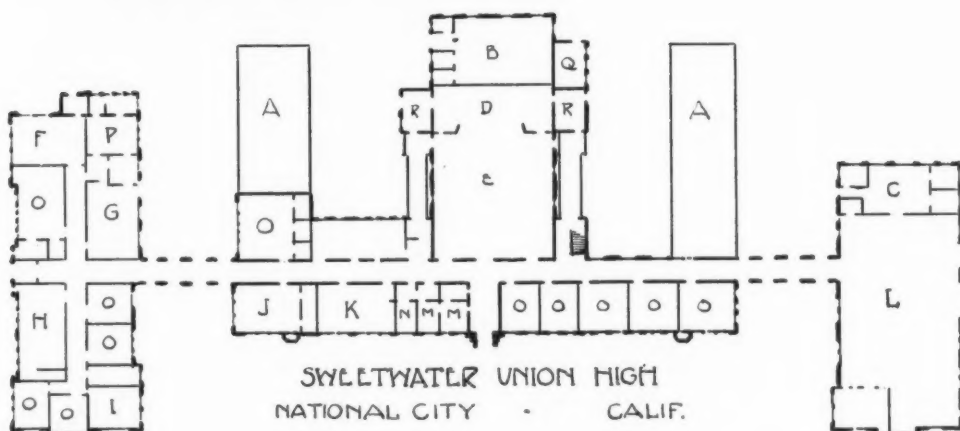
This school building is braced and reinforced to withstand the attacks of the winds which blow during the hurricane season, from August to October each year. The entire building is anchored securely to the foundation while every precaution has been taken in constructing the roof so that it is best fortified to resist the

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SWEETWATER UNION HIGH SCHOOL,
NATIONAL CITY, CALIF.

J. Harold Hawkins, Architect,
Chula Vista, Calif.



SWEETWATER UNION HIGH
NATIONAL CITY - CALIF.

1890's Versus 1920's
J. Harold Hawkins

The history of California might be summed in the phrase "fast and furious." Comparatively young in number of years, this far-west state, however, has made strides. A glimpse at the school buildings will suffice to prove the rapidity of her "turnover."

One can readily imagine the satisfaction of the post-Victorian workmen when they viewed with probable pride the complete job of the cupolaed and towered schoolhouse. Viewed with present-day eyes, the barnlike building isn't so alluring. And when one has at his elbow, so to speak, a modern school building for comparison, the change is almost unbelievable. Dingy, poorly lighted, and inadequately-venti-

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Measuring the Ability of Poor Townships to Support Schools¹

Harold F. Clark, Associate Professor of Education, Indiana University, Bloomington, Ind.

A continuous discussion is going on today in regard to the cost of public schools. Without a scientific knowledge of the ability of the community to bear this cost, the discussion is largely fruitless. The necessary detailed investigations to determine the ability of a community to support schools have not been made. Until such investigations are made, discussion as to whether schools are costing too much is based almost entirely upon opinion.

The following study was undertaken; first, to obtain some definite facts as to the size of the income in a poor township; second, to obtain some idea of the effect of income upon ability of this type of township to support schools. It must be kept in mind that many factors determine the type of school provided in any community. But this study was restricted to only one of these. Income is only one of the factors determining ability. However, income is a limiting factor in many cases and an important factor in every case.

Varying Types of Schools

The type of schools provided in the community where the average family income is \$400 or \$500 must of necessity be different from the type that can be provided in the community where the family income is \$1,800 to \$2,000. It may seem incredible that there are communities in Indiana where the average family income is only \$500. What is the ability of such a community to provide schools? Some facts in regard to this will be given later.

A child who happens to be born in one of the poor communities has as much right to an education as one born in one of the wealthier communities. The people of the community may be just as anxious to give it to him. It cannot be done without help. Is the state going to help? If so, to what extent? More sentiment than reason has been expended in the arguments on this question. Sentiment may ultimately play an important part in the answer. In the meantime it is important to know the economic ability of one community to support education as compared with another community.

Sooner or later it will be necessary to consider the economic effects of state aid upon the poor communities and upon the state at large. Under the emotional appeal of the past it has been possible to subsidize a community so heavily that it has kept people in an economically undesirable position.

The Income of the Township

Before it was possible to consider the relation of income to ability to support schools it was necessary to find out the income. The only way to find out the income was to make a personal investigation in a certain community. This was done. The procedure is given below.

To determine the total income of any community involves considerable difficulty. The difficulties are increased in many ways when the community is a farming section. This is easily seen from the study necessary to approximate the value of the services and commodities consumed on the farm.

The first thing necessary was to decide upon a relatively simple, yet accurate, definition of income. It is immediately evident that much of the farmer's income is not received in money, but is in the form of commodities that are consumed on the farm. The milk, eggs, and butter that are eaten should be counted a part of the farmer's income, as well as what he sells to other consumers.

The definition of income used was *net sales plus wages plus value consumed*. From sales would have to be deducted the amount paid for anything used in production; if feed had to be bought for hogs, the cost of the feed would be deducted from the sales. If the hogs were bought, the price would have to be deducted.

Under sales, care had to be taken to exclude the sale of capital assets. The money taken in during any year might be greatly increased by selling the farm machinery, the work horses, the milk cows, or other stock. In other words money might be obtained by depleting capital. To estimate the capital assets it was necessary to make a rough inventory at the beginning and at the end of the year. If the capital is about the same at the beginning and at the end of the year, sales have been made from production. Wages would include any money received from working on the road, railroad, carpentry work, working on another farm, or any other work from which wages were received. In most places, to the wage item would be added profits and interest on investments. In this township, investigation showed that these items need not be considered.

The most difficult item to obtain accurately is the value of the products consumed on the farm. Records were not kept and offhand guesses for the entire year were not of much value. However, if the estimates were made on a weekly basis, they seemed to be fairly accurate. For example, it was possible for a farmer to state the approximate number of eggs consumed in a week, but he was at a loss to give the yearly consumption. Certain checks that could be applied to the estimates showed that they were probably not in error more than 20 per cent. The error is probably much less than this.

Net sales, if not depleting capital, plus wages, plus value consumed on the farm gives an approximation to the total social income. Even such items as pensions and gifts from outside the township were investigated, but added almost nothing to the total income.

By no method of figuring can the total income of the township be made much larger than \$100 per capita. As will be shown shortly, after deducting certain legitimate costs of production, the available income will be considerably less than \$100 per capita. The total income of the township is slightly less than \$30,000. This has to support 300 people in their public and private activities. It is quite evident that it is not going to allow a very high standard of living. The support of schools and of all other public enterprises must come out of this amount. The result is that neither the schools, nor the roads, nor any other public services are satisfactory. To provide such as are provided makes a tax rate almost unendurably high.

The Wealth of the Township

The entire township is assessed at about \$140,000, approximately what a 640-acre farm would be worth at a rate of \$200 per acre. Such a farm is not uncommon in some parts of the state. What would be the conditions if the income from such a farm had to support three hundred people and build schools, roads, etc., for the entire township? The schools and roads would not be very satisfactory, and the standard of living probably would not be either.

The true average value of the land in this township in 1925 was about \$8 per acre. For a recent year, the per capita assessed valuation was \$482 and the per-child-of-school-age valuation was only \$1.743. A school-tax rate of \$1

per hundred would produce \$17.43 per child, the average expenditure for schools per child (of school age) in the entire state was about \$75. To provide even an average school then would take a school tax of \$4.30 on the \$100. This combined with other township, county, and state taxes would be so large it probably could not be paid.

Inability of Township to Support Schools

That the tax probably could not be paid can be shown from the following figures. It would take about \$6,500 to provide for average schools. The other township, county, and state taxes now amount to about \$3,000. This would necessitate a total of \$9,500 to be paid in taxes. The total money income of the township is only about \$20,000. This includes total wages and sale of all farm products. The taxes would take almost half of the total money income. If anyone believes that 300 people in the township could pay over \$9,000 in taxes and live on the \$11,000 money income, he is indeed an optimist. Some one might answer that the people in the township are not much better off now, which is indeed true from one standpoint, but the difference is important. Instead of the township paying \$6,500 for schools, the township raises some \$1,500 and the state gives about \$2,000, and the children suffer the difference.

It is probable that the state is subsidizing this township and encouraging people to stay in a situation that is not defensible economically. We have a township that is too poor to maintain services which the state demands as essential safeguards of the state and which are the rights of every child.

Results of Old Methods of Aiding Townships

Lest there be a misunderstanding, before we proceed any farther with the argument, let it be understood that we believe every child has the right to, and should be given a chance, for a satisfactory education and, if necessary, the state should pay the bill. The argument to be advanced is to make this more nearly possible rather than the contrary which may appear from a careless consideration of the facts.

Because of the arguments of the sentimentalists in the past, the state has aided these poor districts. Has it not done so in a manner which has tended to keep people in localities that are economically unsound? The evidence is reasonably clear that the state has subsidized these people—tended to keep them in economically unsound positions when otherwise they might have moved out and have contributed to the economic welfare of the state.

We do not say this should not have been done. We do say that it should not have been done accidentally, unintentionally, and under the influence of sentiment as it was done. If the state deliberately wants to subsidize certain communities, all right. It should not be done without a careful consideration of the reasons and the possible consequences.

No one is questioning the statement that the state should provide educational opportunities for every child in the state. The provision should not be made in such a way that the state encourages people to remain in positions economically unsound.

It is quite possible to construct a system of state aid that will guarantee every child a chance for an education and that will be sound from the economic standpoint. Indiana has the opportunity to begin on such a system of state aid. Will she accept it?

This discussion has not assumed that the state should not aid poor school districts. It has assumed that the state should not give the aid in such a manner that it subsidizes certain weak districts and tends to keep people there longer than they would otherwise stay.

It is possible that the best thing the state could do would be to get the people in a better

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¹Paper read at the Thirteenth Annual Measurements Conference, Indiana University, April 16, 1926.



THE AMERICAN School Board Journal

WM. GEO. BRUCE }
WM. C. BRUCE } EDITORS

EDITORIAL

IS THE PARENT-TEACHER ASSOCIATION A HELP OR A HINDRANCE?

A high-school principal in Wisconsin recently sent a questionnaire to a number of other high-school principals in the same state dealing with the question named in the title. The purpose of the inquiry was to determine the degree of popularity or unpopularity of the modern parent-teacher organization as experienced in the several communities.

Admitting, in the main, the laudable purpose of the parent-teacher movement, the experience of the school executives and teachers with them does not lead to a unanimous approval of the same. The laudable purpose of the parent-teacher association is conceded, but upon the practical operation of the same some differences of opinion are entertained among school workers.

When the principals were asked: "In terms of your experience is the parent-teacher association one which school administrators should encourage?" there were 58 affirmative and 19 negative replies. To the question: "Do you plan to boost the P. T. A. as much as possible in your school this year?" the answers were, yes 51, no 50. Then this question was presented: "With the experience you have now with the P. T. A., would you take the initiative to organize one if you were to go into a community where the organization had not been given a trial." The answers were 46 yes, 40 no.

From the inquiry it also became evident that the majority of the teachers are not particularly partial to the movement. When the several principals were asked the question: "Were the majority of your last year's teachers enthusiastic about the Parent-Teacher Association?" the replies were, 24 yes, and 58 no. And when the final question was asked, which read something like this: "From the standpoint of administration, do you think that your school could be managed more efficiently with a Parent-Teacher Association? the answers came: 35 yes, and 59 no.

As indicated at the beginning, the value of the movement is generally conceded. The opinions expressed in this inquiry by schoolmen were to the effect that it increased cooperation, educated parents, stimulated interest in the schools, aided in fostering extracurricular activities, and made for the general progress of the school system.

The number of those, however, who held adverse opinions was even larger. They urged a number of reasons for the position they had taken, and first among them the fact that the people of the community are through parent-teachers' bodies trained to meddle with school administrative problems. "Petty grievances are aired and arguments result," say a number of principals. "Destructive criticism develops, and factions are produced."

An inquiry such as was made by the Wisconsin high-school principal is by no means conclusive. It would require a more extensive review to establish the merits and demerits of the par-

ent-teacher movement. The results of the questionnaire here discussed, however, disclose some of the evils and shortcomings to which the movement is subject. Nor does it mean that Wisconsin stands singular in disclosing these evils and shortcomings.

Some of the most vexatious rows engaged in during the past year between the public and the school authorities in a number of communities in the mid-west and western country were caused by the parent-teacher organizations, or similar bodies, in an attempt to usurp the function of the regularly constituted official body. They have not only harassed superintendents, principals, and teachers, but have sought to dictate policies and departures to the regularly constituted authorities.

To state these things is by no means to be construed into an effort to condemn the parent-teacher movement. On the contrary, it is to point out that if the movement whose purpose is a most laudable one, is to function properly, and to realize its finest objectives it must know its own limitations as well as know where the danger zone lies. It must know how to become a help and how to become a hindrance, and finally it must have a proper appreciation of the difference between the one and the other.

WHY SCHOOL ELECTIONS DO NOT ATTRACT A LARGE VOTE

In the municipalities of several states school-board elections were held last spring. Most of these have reported there was a lack of pre-election interest and that only a light vote was cast. In the few instances where a large vote was polled it developed that the citizenship had been worked up to a high pitch of interest over some local issue, or where a bitter rivalry between candidates had been engendered.

In several midwest communities so-called citizens' committees were created for the purpose of arousing an interest and bringing out the vote. The fear was that the general apathy would result in the election of persons who were wholly unfit for board of education service. In most instances the committees presented a list of desirable candidates for public consideration and secured the support of the local press in their behalf.

Where the names of those proposed for reelection remain unopposed by other candidates the assumption must be that they had rendered good service and deserved the recognition sought for them. And where there is no contest the vote is bound to be light. As a rule, a lack of interest is construed as meaning that the public is satisfied with its board of education and does not deem it necessary to go to the polls.

The apathy which usually attends a school election, held separate and distinct from other elections, has prompted the suggestion that such school elections should be held in conjunction with regular municipal elections and thus tend to swell the vote. The fact is that in a number of states where at one time the local school elections were combined with other elections separate elections are now provided for.

The legislature of Iowa recently enacted a law whereby such separate school elections are abolished, and where all school elections will henceforth be held in connection with the regular municipal elections. Elections cost money and the thought here is that while the citizens are voting for a mayor or an alderman, they might as well go lower down on the ballot and make their crosses for a few school-board members. This saves money for the taxpayer.

There is a distinct advantage, however, in keeping school elections apart from the campaign contests which attend the election of other political officers. Not only do the candidates for board of education honors usually occupy a tail-end place on the regular city ballot, and

may thus be overlooked as to relative merit, but the danger that such candidates may fall a victim to political trading is invited. Experience has demonstrated that fact.

An election called at which candidates for the board of education only are to be considered will permit a more discriminating choice. It centers thought upon the public schools, rather than upon other public utilities, and tends to measure the character and fitness of school-board candidates in the light of school needs as the citizen sees them.

SUCCESSION IN SCHOOL ADMINISTRATION AND ITS PREROGATIVES

A board of education in an Ohio town, recently declined to reelect the superintendent of schools for a term of three years because the present board would be out of office in two years hence. A member arose to state that it would be unfair to tie the hands of the succeeding board for one year by reelecting the superintendent. Perhaps the succeeding body, he argued, would want a different man.

The superintendent under consideration had demonstrated his efficiency and was entitled to reelection if he so desired. The argument, however, that a future school board might want a different type of man seemed to catch the fancy of the members and the reappointment was held in abeyance.

If the principle here advanced were to be carried to its logical conclusion, it would mean that every successive school board must have a different superintendent. It assumes that the tenure of a school superintendent must run concurrently with that of the board of education.

It seldom happens that all the members of a board are retired at one and the same time and that a board is elected whose members are all new. As a rule, old members drop out at election time and new members come in, thus giving a certain continuity to the board. With the shift in the personnel a new presiding officer may be chosen, but the fact remains that the so-called new board of education is made up of both new and old members.

There are periods in the life of an administrative body when certain duties are to be performed. To hold that these duties should be deferred and left to a future body simply means to shirk tasks which are clearly before the present body. The assumption must be that there is no such thing as an old or a new school board. The school board is a continuous body whose membership and leadership may undergo changes but whose collective duties and obligations never change.

If the term of the superintendent expires and he is entitled to a reelection—be that for one, two or three years—there can be no legitimate excuse for deferring such reelection. Every board of education is to a certain extent bound by the acts of its predecessors. It would be just as illogical to defer the employment of executives as it would to defer the building of a new schoolhouse, the adoption of a course of study or the adoption of a set of textbooks simply because one board did not want to tie the hands of its successor. Surely, if a school board respects the acts of its predecessor, it has the right to exact the same respect at the hands of its successor.

It is, therefore, a false courtesy to hold that an act which is both expedient and wise at a given time, should be deferred because perchance somebody in the future may believe such act an invasion of his prerogatives. A wise and timely act is always acceptable. The founders of the Republic did not wait to learn what succeeding generations thought of their plans of government. They acted when the duty was upon them.

School administrators must act when duties are clearly before them. They cannot afford to be finicky and evasive when common sense dictates decisive and conclusive action. Finally, the fact remains that while a school-board membership is a transient affair the profession of the educator is a life's calling. School-board members may come and go, the schoolmaster remains and should remain if he possesses the character and efficiency which his calling exacts the disappointments that had been encountered.

CONFLICTS BETWEEN BOARDS OF EDUCATION AND TEACHERS

A symposium was staged at the recent Seattle N. E. A. meeting by the Department of Classroom Teachers on the subject of "The Outstanding Benefit Conferred upon Teachers by Our Board of Education." The speakers described some of the things that had been done by their school boards which met the approval of the professional workers. Others dealt with the disappointments that had been encountered.

"We wage a continual conflict with ignorance, but frequently the conflict becomes one with our board of education," said Lucy Brickhouse of Norfolk, Virginia. "We are fighting for sabbatical leave in Norfolk. So far our efforts have not met with dazzling success. A bill for tenure is now before the Virginia legislature. We hope some day no teacher will fear a change of administration. Cumulative sick leave is on the calendar, but the outcome is doubtful. A salary raise is out of the question. I wonder if the school board will see sometime that we are fighting for and not against them. Probably the solution lies in our hands. We are training for the future boards."

A more pleasing picture is drawn by Maude Compton of Omaha, Nebraska, who said:

"I believe the outstanding benefit conferred upon teachers by our board of education was that in the face of this huge deficit and a demand that it be wiped out in one year, they decided it would be 'penny wise and pound foolish' to lower the teachers' salaries. They have stood as one maintaining that a high standard of education can be maintained only with high-standard teachers and high-standard teachers can be maintained only with reasonable compensation. The morale of the teaching force of our city has been made better by the teachers knowing they have a sympathetic board of education that will protect them in a time of crisis."

Another statement, which is favorable, is made by Nell E. Lain of Kansas City, Missouri. She points out that the board of education of that city maintains a liberal policy in the matter of salaries and in granting leaves of absence on account of illness. "The majority of the Kansas City teachers are highly appreciative of these two outstanding considerations for their physical and professional welfare." She then sums up her own conclusions on the subject in the following language:

"The idea that boards of education and teachers must be natural enemies in order to further the education of children is no longer believed to be essential. To a marked degree the two groups are joining forces to work more harmoniously toward the growth of the child. As a direct outcome of this changed attitude, those things that are conducive to the general welfare of teachers are being regarded as not only desirable but also necessary. Thus many provisions for the betterment of teachers which would formerly have been acclaimed as great privileges are so customary throughout the country that they would not be considered outstanding at the present time."

That conflicts should arise between boards of education and the teaching forces is only natural. Such conflicts are bound to arise where the relations are those of employer and employee and where the wage schedule and conditions of labor come into serious consideration. An intelligent approach to the equities involved in the matter of compensation and administrative regulation, lessens friction and leads to an amicable adjustment. Open hostilities seldom arise.

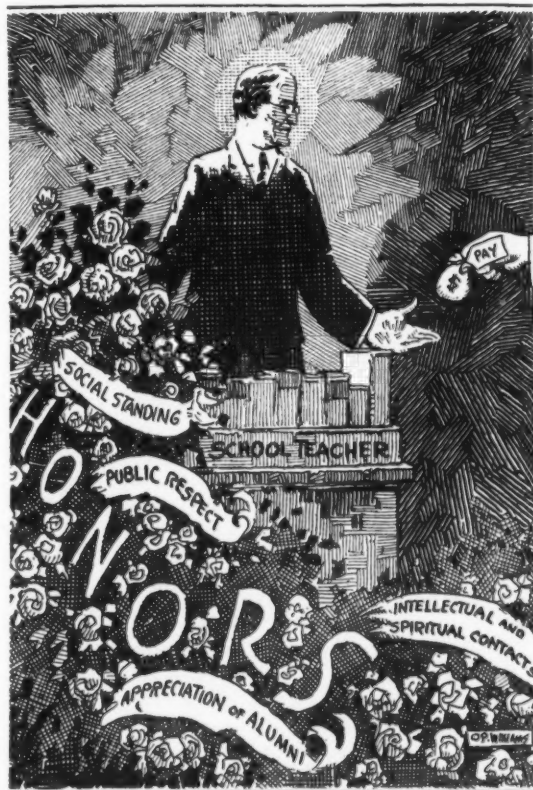
SUPERINTENDENT AND TEACHER

The service of the teacher is more than forty centuries old, while that of the school superintendent is scarcely one. In this short period the superintendent has climbed a rugged, tortuous way, often misunderstood, opposed, frequently overthrown and yet returning to the struggle until he has climbed out of the fog of inadequate education and training, out of the confusion of political and personal bases of action and into the clear light of a profession and into a position of great power. This achievement has made him enemies, both within and without the school. The political minded, more-pay-and-less-work, and backward-looking teacher, the selfish politician, and propagandist are the enemies of the good superintendent. I hold no brief for the incompetent superintendent but for the good superintendent proper security in tenure must be provided. In securing tenure the teacher has shown the way for the superintendent to follow.—J. M. Gwinn, Superintendent, San Francisco, California.

The teacher has the right to make demands, and the board of education has the right to grant or to deny them. The demands made by a body of professional workers are always subject to thoughtful consideration. The administrator must determine, in the first instance, whether they are justifiable, and in the second, whether they are expedient.

The relations between boards of education and teachers as exemplified throughout the country, have on the whole, been pleasant and satisfactory. The few eruptions which are noted are in no wise indicative of a general conflict between them. The average board of education is considerate of the professional forces, has an adequate appreciation of their services, and is desirous of compensating them in accordance with their value and in keeping with its financial ability to do so.

The test of the attitude of the administrators toward the professional workers came with the deflation period. The administrator who has been hard pressed for funds and who has been compelled to practice rigid economy has not reduced teachers' salaries. He has clung to the policy of continuing the high-salary mark and exacting better service. In other words, the average board of education manifests today a higher appreciation than ever before of the services of the teaching forces, and the conflicts are few and far between.



NOT LESS HONOR BUT MORE PAY.
—Seattle Post-Intelligencer.

ART EXPRESSION IN SCHOOL ARCHITECTURE

With the tremendous expansion of the high school, as a part of the system of popular education of this country, it was reasonable to assume that it would also lend itself to greater dignity and splendor as an architectural creation. The American people have experienced an increasing appreciation for architectural grace and beauty, and in thousands of cities the high school is the one local structure in which this desire for art finds its best expression.

The question is occasionally raised whether school authorities have the right to indulge in the ornate in high-school architecture. Where this is done at the expense of the strictly utilitarian or to the neglect of the elementary schools, there may be grounds for the charge. But, when the school authorities have met the ordinary requirements in housing the school population, there can be no objections to high schools that make a pretense in the direction of decorative art, providing the community is satisfied to have it so.

In this connection, however, it should be said that some of the finest mural paintings that have gone into high schools in recent years have not been paid out of public treasuries, but have been the generous gift of public-spirited citizens. Here indeed is an opportunity for those who desire to dispose of their private wealth for public good. The average community manages to provide the necessary schoolhousing, but cannot afford to indulge in the ornate and artistic.

"Our architects, our Bruces with their SCHOOL BOARD JOURNAL, are educating local authorities to beautify parks and cities by making schools such municipal monuments as will typify the pride of a town in itself."

This paragraph appeared in an article on "Murals and Morals" published by the *Educational Review* recently. The purpose of the article was to point to the fact that art had found eloquent expression in mural paintings which had gone into several high-school buildings.

There is an increasing tendency on the part of men who have acquired great wealth to leave something after their death for the benefit of mankind. Colleges and hospitals have the main beneficiaries of private bequests. In a smaller way communities have been favored with soldiers monuments and park lands. Such bequests are laudable and an evidence of a generous spirit on the part of the donor.

The objects of art such as pictures and sculpture work, now found in the high schools are usually provided through funds raised through entertainments and student contributions. Mural paintings of merit call for large expenditures which are not within reach of the student body. Here the man of generous means must come to the rescue.

With the ascendancy of the modern high school as an educational institution, and at the same time as an architectural creation, it has become the pride of the citizenship in thousands of communities. It constitutes in numerous instances the architectural gem of the community as well as the intellectual center of its people.

Why not afford an expression for the finer aspirations and tastes of the public in paintings and statuary? Why not give a housing to art treasures in the high school, more particularly in towns where art galleries are not a possibility? Why not encourage a private wealth to serve the cause of cultural progress through the local high school? What other local institution is better suited to house certain treasures of art, or to afford a wider influence to a local constituency?

Recordkeeping in the High School

G. L. Harris, Extension Instructor in Education, University of Chicago

Recordkeeping in the high school is never a simple matter of clerical routine. It involves always a definitely construed policy as to several coordinate administrative activities. For example, the clerical work to be done by the teaching force, the attendance procedure, student accounting and reports to parents, and the details of office control of records must all be a well-formulated part of a general plan.

We shall keep in mind the necessity for such a plan in our discussion, but we shall deal here only with the details of reports from teachers, and of permanent records in the office.

Reports from Teachers

How much clerical work shall be demanded of the teacher in the high school?

The procedure in some schools places almost the entire burden of recordkeeping on the individual members of the faculty, requiring the teachers to make out a detailed report of the activities of each pupil in each class, to make out the pupil's report to parents, and to copy the pupil's record on the permanent office-record forms.

Rarely do we find schools which definitely attempt to reduce to a minimum the amount of clerical work required of the teachers. Only the most progressive schools have yet realized the obvious fact that teachers are extremely expensive clerical help. Not only is this true in a strictly monetary sense, but it is true in the equally important sense that the requiring of burdensome clerical work fosters undesirable reactions on the part of the faculty members.

A teacher who has devoted years to securing a special training, whose mental and physical efforts are daily expended in lesson planning, organization, and actual teaching, rightfully resents being called upon to do routine copying of records that can be done by any clerk.

In our discussion of recordkeeping, therefore, we wish to emphasize strongly the minimizing of clerical work to be required of the teachers, and we shall show how this clerical work is being handled in the principal's office in many high schools.

FIG. 1. TEACHER'S REPORT.

The teacher's report form shown here (Fig. 1) is designed to place practically the entire burden of recordkeeping on the office, and consequently to keep in the office a thorough control of all records.

This form is printed on an 8½ by 11-inch sheet of paper. Each teacher fills out a separate form for each class which he teaches. The front of the form provides an alphabetical list of the pupils in each class, an absence summary, quarterly grades, the examination grade, and

the final average. The report shows not only every pupil who has carried the course throughout the quarter, but it lists every pupil who has attended the course for any length of time.

The back of this form is especially important. Here the teacher records a summary of the work done by the class for the semester. The textbooks used are listed; the teaching methods are explained; and any other facts, which may be useful as a matter of permanent record, are set forth.

Reports of pupils are generally required only twice each semester. And the details on the back of the form are required only at the end of the semester.

Of course only the appropriate "grade" columns on the front of the form are filled out each time. From these reports the office can make the entries on the pupils' permanent record cards.

With this plan the teacher's clerical work is reduced to a minimum. Yet the report cards are made out completely during one day. The office handles all of the details of permanent recordkeeping, securing the data from the teachers' report sheets.

Permanent Records

We have emphasized the advisability of complete control of the permanent records of high-school pupils being kept in the principal's office; and we have emphasized also the advisability of the clerical work on these records being done by the office clerks.

A permanent and complete record of the school history of every pupil is essential. The principal of the high school should be able at any time to have before him in condensed form the entire history of every pupil then in school, and of every pupil who has ever been in school. When a graduate of the school wants a transcript of his record, he should get it—promptly. When the principal talks with the student, the student's parents, or a prospective employer of the student, the permanent record should enable the principal to speak with authority on every phase of the student's school life.

But this condition is seldom found. It is generally a very difficult matter for a graduate of a high school to secure a record of his grades at any time after graduation. And the principal seldom can place his hand on the particular information he needs, just when he needs it.

Such a permanent record form as the one shown here is being used for permanent records of pupils in a large number of high schools. It reduces clerical labor, permits instant reference to the record of any pupil, and makes possible a comprehensive signal control of pupils' activities and peculiarities.

A binding margin of one inch is allowed on the teacher's report sheet, and the complete file of reports for each semester can be bound permanently in book form. A bound record such as this is valuable and extremely compact. The entire record of school activity could be reconstructed from these sheets, if necessary. And the information they contain often becomes increasingly valuable, both as a matter of school history and as a source of detailed data in individual cases.

When a student is reported conditioned on the teacher's report sheet, a later report sheet of a distinctive color should be used in reporting the removal of the condition, or in reporting the final failure of the pupil. This report sheet should likewise be bound in the permanent volume of teachers' reports.

Reports to Parents

It would be possible for the office to make out the periodic reports to parents from the teach-

er's report sheet, but we are not so insistent as to relieving the teacher of this clerical work. There is no doubt that the cooperation of the teachers at report time minimizes the clerical load, and we feel that it is frequently legitimate for the office to ask for this help from the teachers. But we do not believe that the teachers should be expected to do the clerical work of preparing and keeping up the pupils' permanent records.

We shall outline here in a brief manner two plans which have proved very successful in making out teachers' reports to parents.

1. In the Stadium High School of Tacoma, Washington, the pupils are divided into several groups or "rolls." Each "roll" is assigned to a roll teacher who is relieved of certain duties, and who becomes the particular adviser of the pupils in his group.

At the report time the class teachers report the grades to the office on class cards. Each class card contains the name of the pupil, the subject, the grade, and the teacher's name. These class cards are grouped in the office according to rolls, and are turned over to the roll teachers. The roll teachers copy the grades on the student report cards which the pupil takes home for his parent's signature. The class cards are returned to the office, and the grades are entered from them on the students' permanent record cards by the office clerks.

The class cards are kept only until after a check is made of the permanent record cards and of the teachers' report sheets. The class cards may then be destroyed.

With this method of reporting, each teacher makes out only two records, namely, the large report sheet, and the student's class card. Of course the class card could be made out in the office from the large report sheet, but since the teacher can make it out at the same time as the report sheet, we feel that this is the more economical procedure. The burden of the clerical work is handled by the office clerks, and the final responsibility for accuracy is placed on the office.

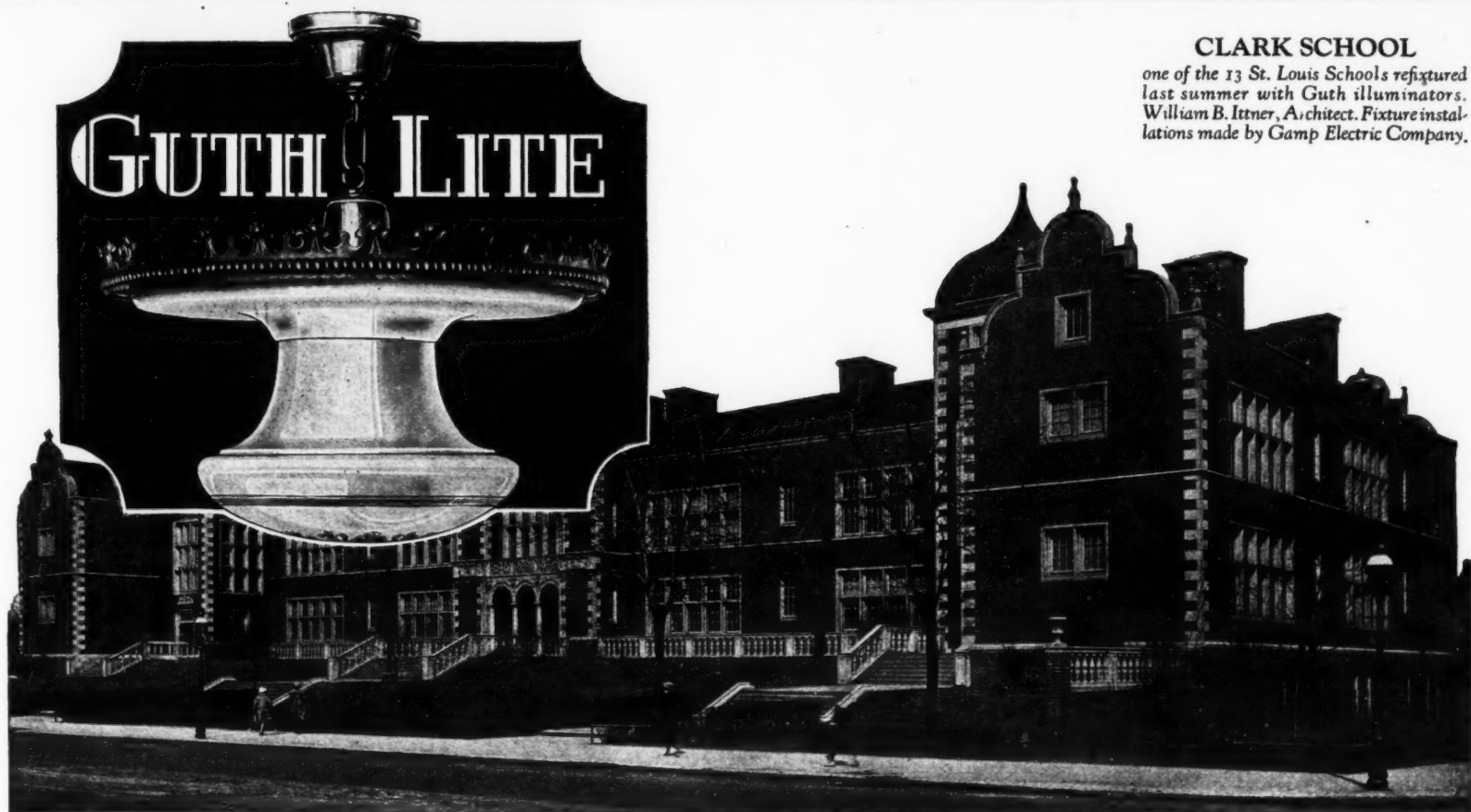
FIG. 2. STUDENT'S PERMANENT RECORD.

2. In the Bloomington, Illinois, high school the first-hour teacher is considered a homeroom or advising teacher. At report time the homeroom teacher gives each pupil his grade card and the pupil takes this card to each of his teachers. The teachers enter on the card the pupil's grades in their respective classes. The parent signs the card on the back, and the pupil then returns the card to the homeroom teacher who keeps it until the next report day arrives.

This form is folded so as to fit into the pocket of a visible file. When folded it is 8 by 5 in. in size. The illustration (Fig. 2) shows how one portion of the card folds down from the top, and one portion folds up from the bottom.

This arrangement permits the use of both sides of the folded form, and makes possible a cumulative record of the pupil from the day he enters the elementary school until his graduation from senior high school. It is the result of a thorough study of a large number of permanent record forms, and with slight modifica-

(Continued on Page 74)

**CLARK SCHOOL**

one of the 13 St. Louis Schools refitted
last summer with Guth illuminators.
William B. Ittner, Architect. Fixture instal-
lations made by Gamp Electric Company.

Any School Can Now Have Modern Light in this Easy Way

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Modern educational methods require modern standards of lighting. The science of illumination has made such strides that equipment supposed adequate ten years ago is now admittedly obsolete. Modern educators consider these facts of the utmost importance in their educational scheme.

Recent surveys show that 25% of school children suffer from

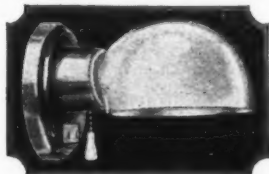
defective eyesight. This is directly attributed to improper lighting in the schools and homes. School-failures, backwardness, restlessness and permanent injury are the natural and costly sequence.

School boards owe it to their children to immediately remedy such an unfortunate condition. Schools in all parts of the country—13 in St. Louis alone last year—are rapidly modernizing their lighting equipment with Guth School-

Lighting Units to make sure they have the best possible solution to this vital problem.

We invite you to call in a Guth lighting expert for a scientific, impartial survey of your lighting needs. No cost or obligation whatever is entailed.

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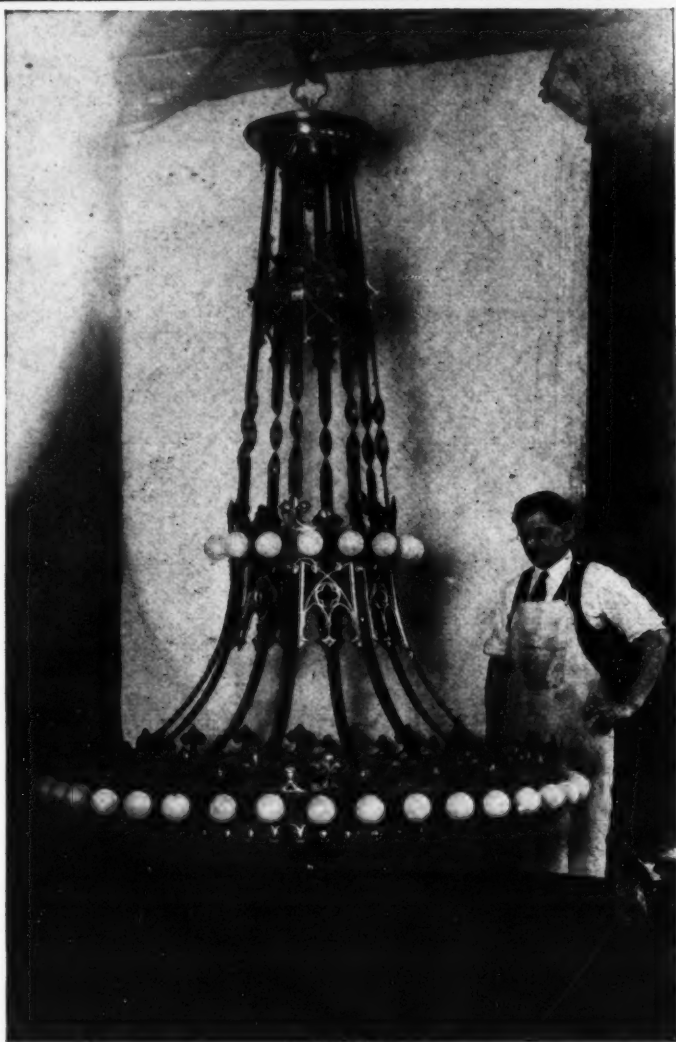
Lighting Equipment
ST. LOUIS, U.S.A.



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DESIGN Y26-15

One of twelve 72-light chandeliers built by Beardslee for the new Denfield Senior High School, Duluth, Minnesota—Halsted and Sullivan, architects.

Lighting Equipment for Schools

The chandelier illustrated at left is 5 feet in diameter and is wired for 4 circuits. It is constructed of bronze and is finished in Ebony and Gold. This is an example of the work Beardslee is prepared to do when the job calls for lighting equipment of special design.

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Illustrated at right is a DENZAR—the ideal light for classrooms. Hundreds of grade schools, high schools, and colleges have installed plain or ornamental DENZARS in their classrooms, study rooms, gymnasiums, laboratories, manual training and domestic science rooms, auditoriums and offices.

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CEILING TYPE DENZAR

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RECORDKEEPING IN THE HIGH SCHOOL

(Continued from Page 72)

tions to meet local conditions it will serve the needs of the schools of practically any community.

The folded up 1-inch portion (Fig. 3), the lower line of which is visible at all times, provides for the following information:

In the Visible Margin—

1. The building where the pupil is located. (A series of colored signals may be used for different buildings. The signal is changed when the student is transferred from one school to another. This part of the form applies particularly to the elementary school part of the record-keeping.)

2. The student's full name, address, and telephone number.

3. A yellow permanent signal may be used to indicate the student's progress through the grades. This signal is placed under squares KG—1-12, and is moved only on promotion at the close of the year or grade. It is thus possible to locate the records of students of any desired grade without touching the cards of the other students.

4. Under the square "Red, Below Normal" a red signal is placed if the student is below normal. A green signal is placed here if the psychological test shows that the student is preparing for work for which he is not adapted.

5. Under "Signal Vocational Choice" a signal over one of the four squares indicates the high-school course that the student has chosen.

6. When black shows through the hole below "Special Reports," it indicates that no special reports have been made. When a doctor, psychologist, or some one else has made a report, a colored card containing the report is inserted in the visible pocket behind the turned up portion. This card shows through the hole and

FIG. 5, ABOVE. FIG. 6, BELOW.

instantly attracts attention. Colored report cards remain until the case has been fully cared for, as does also the green signal referred to in 4, above.

7. A signal over the squares 3, 2, 1, N, etc., along the lower right margin indicates how far below or above normal the student is in his class standing, according to his age. The type of signal indicates the pupil's position in his class. Some colleges, for example, will accept only students from the upper quarter of the graduating class of the high school. And it is helpful in discussing a pupil's record to know just how he stands as compared to the rest of his class.

If, for example, the pupil is normal as to his age-classification, the signal would be placed over the letter N.

FIG. 3, TOP. FIG. 7, MIDDLE. FIG. 4, BOTTOM.

Above the Visible Margin—

On the 1-inch folded-over portion of the card the following information is shown above the visible margin:

1. Date graduated from high school.
2. Rank in graduating class.
3. College entered. This gives an indication of the school's problem in training for future work. If a large percentage of students enter a certain college there should be very close cooperation with that college.
4. "Course Taking" indicates the course the pupil chooses at college.
5. Final Number of Credits. This is the total number of credits at high-school graduation.

(Concluded on Page 76)



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that our organization has learned about floors is at your command. Write our Department S for information about resilient floors, samples and prices—we will be glad to serve you. No obligation.

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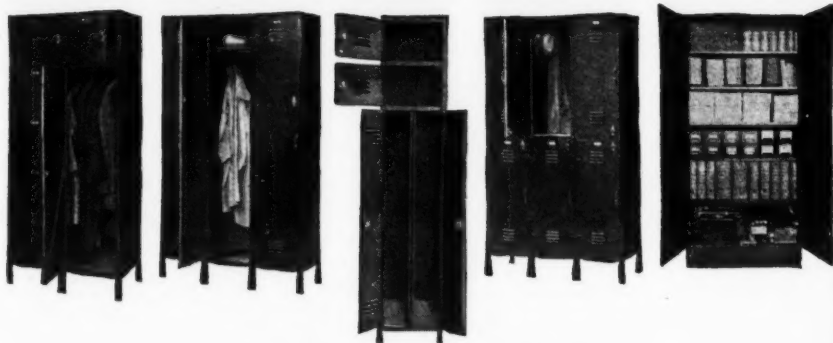
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Durand extra years of service are real—we can point with justifiable pride of workmanship to school installations which are unequaled, as witnessed by

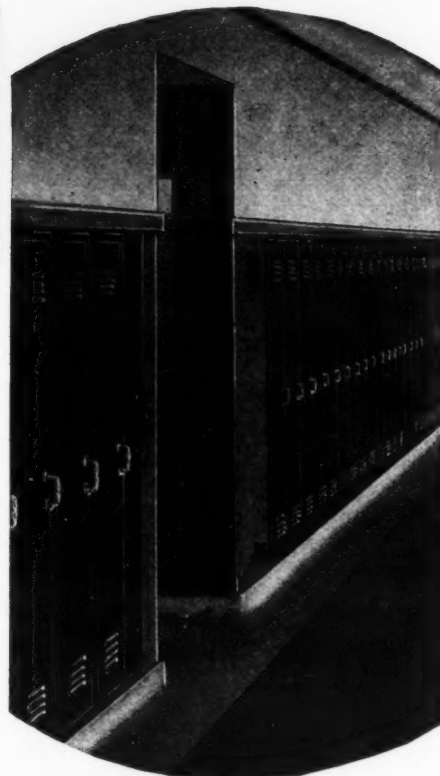
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910 ACADEMY BLDG., NEWARK.

(Concluded from Page 74)

Outer Flap of Card (Fig. 4)—

1. Information concerning student's parents.
2. Address changes.
3. General information.
4. Record of school changes.
5. Elementary school record of averages each semester. (Subjects not printed can be listed in blank spaces.)

Inner Flap of Card (Fig. 5)—

1. Here is space for a complete summary of psychological tests given to the student. It shows the grade in which the student was when the test was taken, the name of the test, the result of the test, etc. Twenty-five tests can be recorded in this space.

2. A record of special abilities and disabilities. A numerical decimal code is used. That is, —1.5 indicates that the student has fallen behind 1½ years.

3. A record of common ailments which influence school progress. Symbols can be used to indicate the pupil's condition as to each ailment.

Body of Card, Front Side (Fig. 6)—

Space is provided here for the pupil's grade by years and semesters, and for his total credits in junior and senior high schools.

Body of Card, Reverse Side (Fig. 7)—

1. Rank and rating of the student on graduation from junior and senior high school. The rating is secured by averaging the rating of all teachers. "H" indicates high; "N," normal; "L," low.

2. Record of honors won and special achievements.

3. Place for photograph at time of graduation from the senior high school.

4. The space under "remarks" can be used for the list of classics read, where this information is required.

A pupil's record kept on this form is complete and cumulative. At any time in his

school career it presents a summary of his entire school life to date.

Naturally such a record is used constantly. In an ordinary vertical file the forms would become torn and unsightly in a short time. But a visible file protects the forms from soil and dirt by individual protecting transparent tips in each pocket. And each form is handled only when it is wanted. It is not necessary to thumb through a number of forms in order to find a particular one. Moreover, the colored signals picture every detail of the records.

Other Permanent Record Cards

It is of course not always possible or advisable to combine the elementary- and high-school records of a pupil on one form. In such cases the elementary-school information above may be omitted and other information may be substituted.

Small Town Essay

F. J. Ward, Superintendent of Schools, Winnett, Mont.

ON TEACHER SURPLUS

A writer tells of the present surplus of teachers. Judging by my own files the gentleman must be right in his deductions. Last spring, I had something like six hundred applications for the fifteen places that I have had to fill.

It is an economic problem. Just how it can be corrected is hard to say. Certainly it can't be made over by better and more attractive applications from the teachers themselves, as this writer seems to think.

There was once a rather cynical member of the Ismay staff who was telling me about the shortage of men in the west—available material I think she called it.

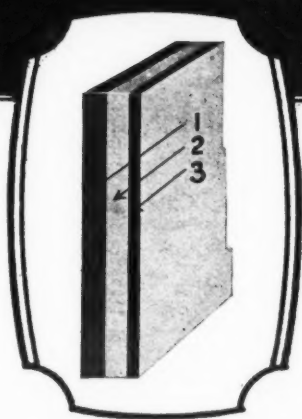
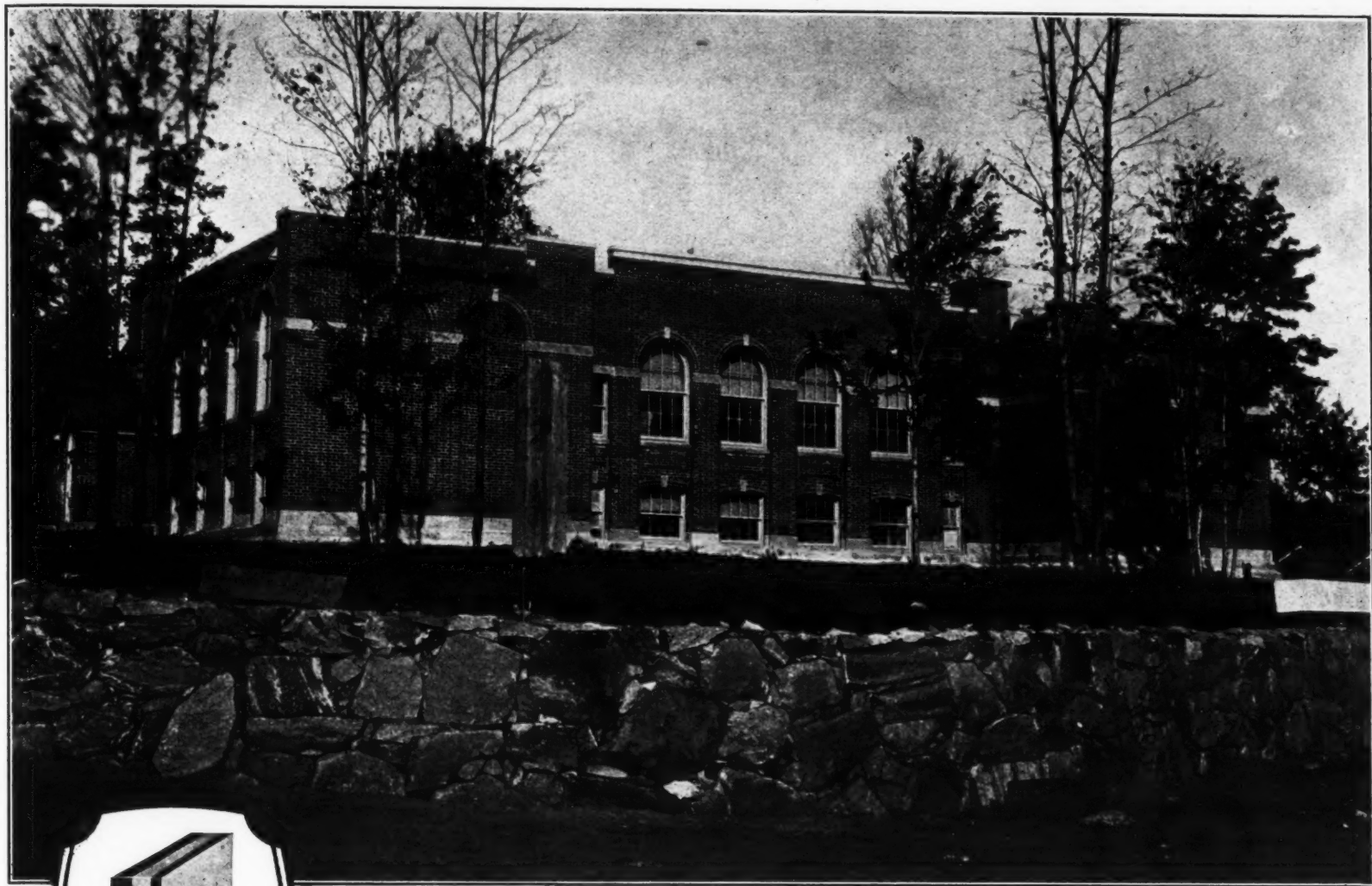
Perhaps our expert adviser to the lovelorn might specify means and ways of powdering

the nose or putting pulverized burnt cork on the eyebrows which would benefit an isolated husband-hunter or two. But when all that were done there would still be a shortage of husbands. A better attention to the details of filing an application might catch the eye of an exacting superintendent, yet it would by no means reduce the number of unemployed teachers or increase the number of school teaching positions.

Especially attention is called to the fact that the permanent-record card does not show the pupil's program, and so cannot be used as a directory record. The program card must be made out anew each year, since the pupil's program changes each year. This card could, of course, be filed in the pocket with the permanent record, but we do not generally advise this. The directory card should be accessible to all members of the faculty, and even to students on occasion. It should not, therefore, be filed with the permanent record card, where information of a confidential nature is entered. We shall discuss this problem in detail in a later article on registration and program problems.

In Montana we have a surplus of teachers. Some rural schools are closed for lack of money. But we still follow the delusive hope that to establish a new normal college will put us back in the top school rank we used to hold. A deduction like this lies on the same plane with

(Concluded on Page 78)



CELESTIALITE'S THREE LAYERS

1. Of crystal clear transparency—for body and strength.
2. A layer of white glass—to diffuse the rays and soften the light.
3. A layer of blue glass—to whiten, clarify and perfect the light.

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schools are using CELESTIALITE glass. And if those located at such remote points as Temiskeming find it worth while to send all the way to New York and pay duty into Canada on CELESTIALITE for the sake of giving their children the benefits of ideal lighting, then surely our schools here in the United States ought to be equally zealous to protect the eyesight of *our* school children.

CELESTIALITE consists of 3 layers of patented glass which diffuse and perfect the artificial light of the Mazda lamp. The result is a light resembling clear, natural daylight—unquestionably the best illumination. Pupils have neither to squint nor strain their eyes in it. For it actually *rests* the eyes and is soothing to the nerves.

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FLOORS**
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(Concluded from Page 76)

the illogical assumption that more interesting, more aggressive letters of application would make the number of places equal to that of the number of persons applying for them.

Get us into a hole and we begin instinctively to reach for our bootstraps.

ON PUNITIVE VIOLENCE

Ten boys once came to a school yard one night and held quite a jamboree about the building. They defaced the walls with colored crayons. They tipped over a swing, split one of the teeter boards with a chopping ax, broke a basement window. They swore at the janitor's wife when she ordered them off the grounds.

The next day the superintendent had it out with them. He used a piece of rubber hose as a part of the conversation. He fired the whole lot until they should pay money enough to make good the damage.

They appeared repentant. They paid the money and got back in school. The superintendent congratulated himself on his firm and manly stand. The incident was closed.

Yet later, there was a rumor of further depredations down town. One night a local chicken buyer lost three crates of hens and he always suspected that the same boys had got away with them. I happen to know that his suspicions were correct. The boys stole the chickens in order to pay their fine for the depredations about the schoolhouse.

A SUPERINTENDENT'S OFFICIAL LETTERS—II

To the School Board:

You will undoubtedly recall a special report which I presented to you several weeks ago on size of classes. I call to your attention that part of my annual report in which I stated

what was done during the latter part of the school year ending June 30, 1923, and the first part of the present school year in regard to combining classes and enlarging classes in the various buildings except the high school building. Between September, 1922, and the fall of 1923 the increase in pupils in those buildings was 413. This would naturally result in an increase of 11 teachers. Actually there was a decrease of 5 teachers. The salary of 16 teachers amounting to about \$22,000 was saved.

It is a well-known fact that the financial condition of the city demands the practice of economy in the school department wherever economy will not impair the efficiency of the schools.

Economy in school administration does not necessarily mean the expenditure of less money for school purposes, but it does mean the expenditure of school funds in such a way as to secure the maximum of educational results for the money expended.

Salaries constitute about 75 per cent of the total amount of current school expenses. It would seem that money can be saved in this item in any one of three ways: (1) by hiring low-salaried teachers; (2) by eliminating certain subjects, such as music and manual training; and (3) by increasing the size of classes.

Number 1 will not accomplish the desired result because low-salaried teachers are poor teachers and a poor teacher is an extravagance. Number 2 will not accomplish the desired result because music and manual training have gained a place among the fundamentals of education. Number 3 alone is left.

My investigations have convinced me that classes can be increased in size without detriment to educational results. The experience in our own elementary grades is additional proof

of this conclusion. The reform has been accomplished in the elementary grades, and the results are satisfactory not only from a financial point of view but also in educational results.

There is no valid reason to suppose that the same results cannot be accomplished in like manner in the junior- and senior-high-school classes. At present there are too many teachers in the junior and senior high schools.

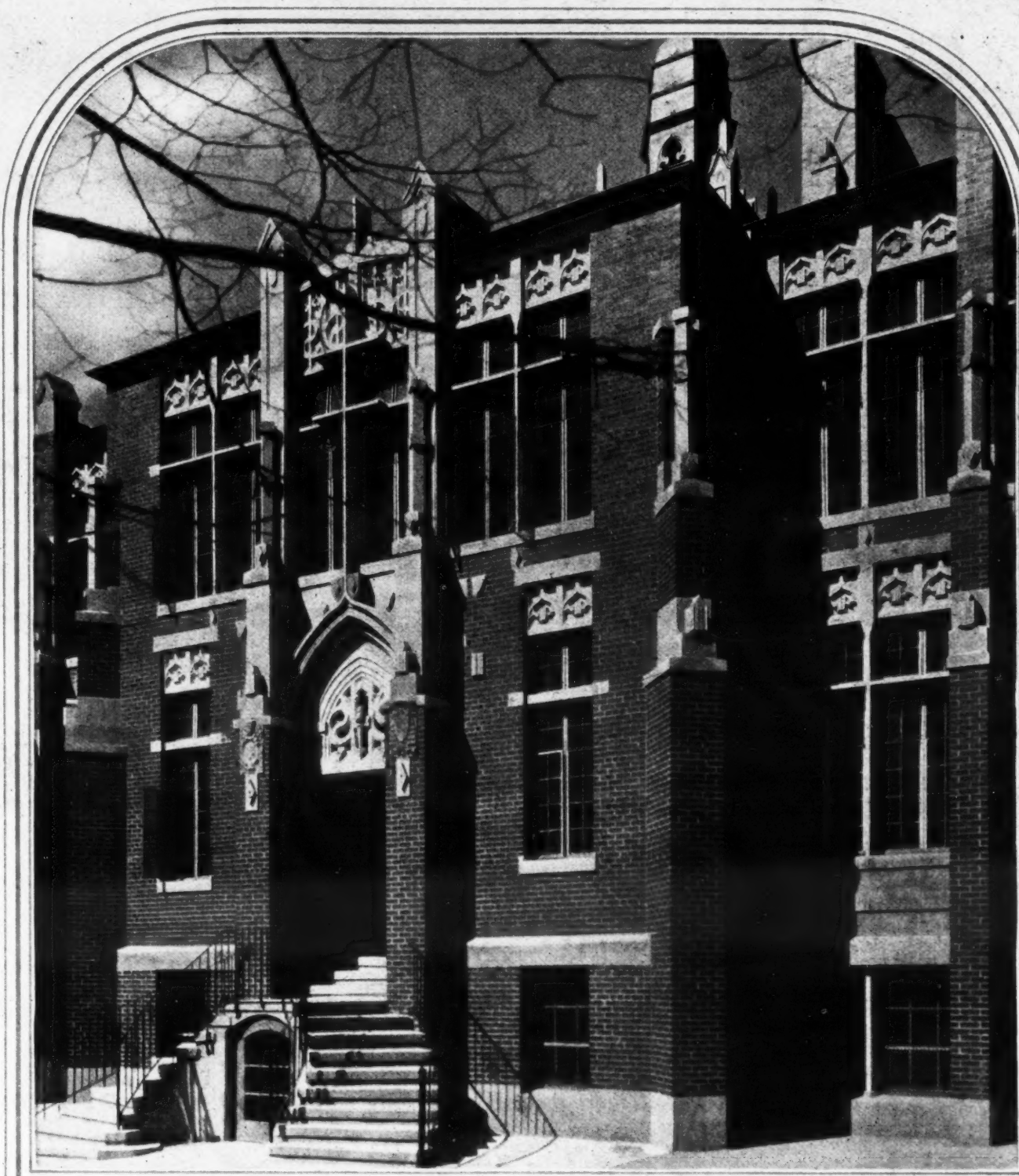
I recommend that you approve the policy of increasing the size of classes in the high-school building, and authorize me in conjunction with the principal to eliminate the number of small classes so far as possible.

The policy now in force in the grade buildings when carried into full effect in the high-school building will result in an annual saving of about \$35,000 for all schools.

I desire to impress you with the fact that I have not reached my conclusions hastily and that they are not based on mere opinion. The investigations set forth in the report already referred to covered a period of several years. Recent investigations in the field of secondary education tend to the same conclusions as in the elementary grades in regard to size of classes and educational results.

One other matter of supreme importance in school administration must enter into any consideration of a permanent policy of large classes, and that is the selection of the teaching force. Very few, if any, inexperienced teachers should be appointed to regular classroom work. Personal and professional qualifications are the only things that should enter into the consideration, and the public should be given to understand that the fact that a person lives in Blank is not alone a good reason for appointing him to a position in the schools.

Very truly yours,
Superintendent of Schools.



ST. THOMAS SCHOOL, JAMAICA PLAIN, MASS.

ARCHITECT: MATTHEW SULLIVAN, BOSTON

CONTRACTOR: JOHN F. GRIFFIN, BOSTON

Architects today are finding appropriate use in modern school buildings not only for Fenestra Projected Windows but also for Fenestra Casements. . . . Both types add much in beauty to the exterior of the building, their attractive lines and small panes harmonizing perfectly with the structural details. . . . For the classroom they have many practical advantages which appeal to both teachers and pupils. These better steel windows provide an abundance of light, yet the slenderness of their framing sections allows ample

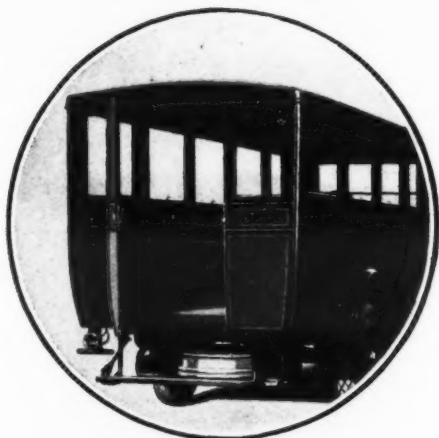
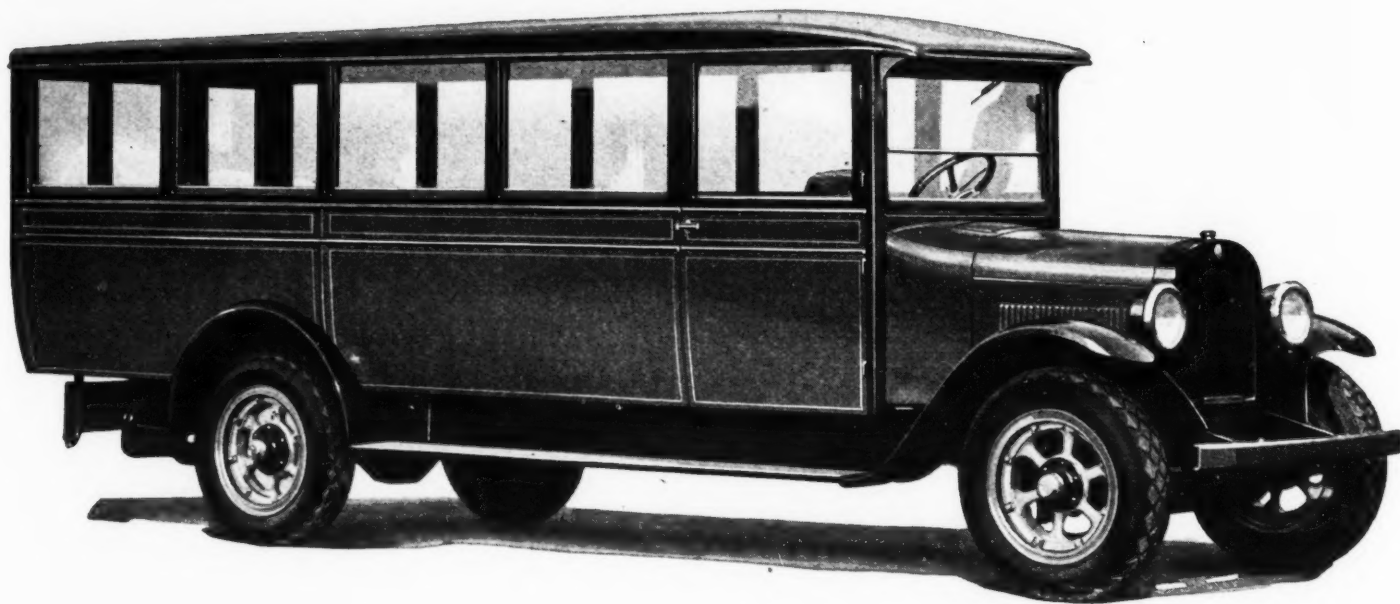
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. . . Economy is another Fenestra advantage—due to low first cost, easy washing from inside the building, and to the low replacement cost of the small panes. . . . The Fenestra Architectural Department is prepared to cooperate with the school architect in offering practical suggestions. School board members and school officials will find much to interest them in the Fenestra catalog.

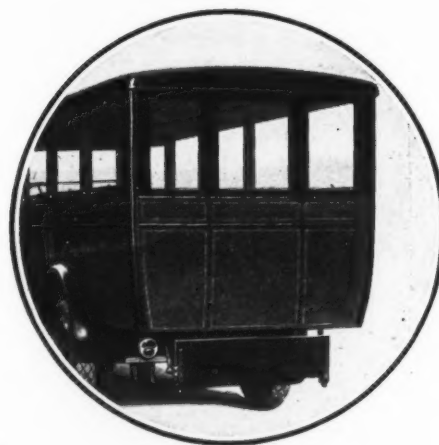
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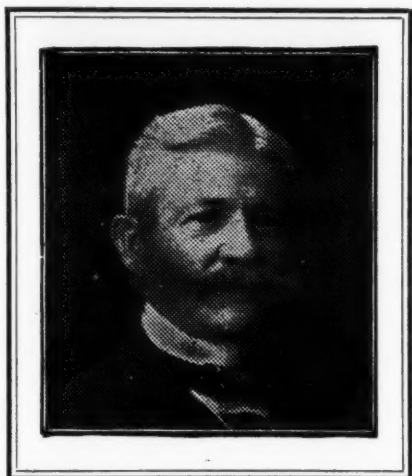
f. o. b. Detroit

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Springfield, Massachusetts

New Rules for the Dubuque City Schools

The board of education of Dubuque, Iowa, on May 23, adopted new rules and regulations for the government of the city schools. The rules were adopted after several months of work by the board as a committee of the whole and indicate the new forward-looking policy of that body. The rules outline the duties and responsibilities of the board and the powers and prerogatives of the superintendent. Only one standing committee is provided, namely, a committee of the whole, which meets at the call of the president and takes up any business relating to the district.

While most of the rules are of the usual kind relating to school administrative procedure, a good many changes have been made largely in connection with the functions and organization of the school board, the duties and responsibilities of the secretary, the duties of the superintendent of schools and the superintendent of buildings and grounds, and policies affecting the general operation of the school system. Among the new features are the following:

School-Board Functions. The board of education shall exercise all the powers, duties, responsibilities, and functions given to it by law. The primary function of the board is the determination of general policies for, and the exercise of general supervision over the public schools, but the detailed administration thereof shall be carried out by the officers and employees. It shall hold its chief administrative officer responsible for the administration and supervision of the entire school system.

School-Board Organization. The board shall provide for the appointment by the president of such special committees from time to time as may be deemed necessary or advisable.

The board shall have one standing committee designated "the committee of the whole." The committee of the whole shall meet at the call of the president, or of any three members at such times and places as it may elect. The committee of the whole may consider any business relating to the

district whether the same shall or shall not have been referred to it by the board. A report of the recommendations of the committee of the whole shall meet at the call of the president, or of any three members at such times and places as it may elect. The committee of the whole may consider any business relating to the district whether the same shall or shall not have been referred to it by the board. A report of the recommendations of the committee of the whole shall be submitted at the next regular meeting of the board.

At its regular meeting in the month of April, or at any meeting when a vacancy exists, the board shall appoint a superintendent of schools, to serve for a term of from one to three years at the discretion of the board as provided by law.

No notice of regular meetings held at the usual time and place shall be required but for the convenience of members such notice may be given in advance by the secretary.

Special meetings may be called by the president of the board at his discretion, or by the secretary upon written request of a majority of the board. Notice of special meetings stating time, place, and purpose of meeting shall be given each member of the board, either by letter deposited in the post-office twenty-four hours before such meeting, or personally, or by telephone at least three hours before such meeting, provided that the presence of any member at the time and place of meeting shall constitute a waiver of notice of such meeting by such member.

Secretary's duties. The secretary shall execute a bond in the sum of three thousand dollars, conditioned upon the faithful discharge of his official duties and delivery to his successor of all district property pertaining to his office.

He shall, in addition to the duties prescribed by law, have charge of all records of the board and of the district and shall be the custodian of the corporate seal of the district.

He shall be responsible for keeping the minutes of the meetings of the board and a calendar of all matters referred to committees and others, and report action or nonaction upon the same at each regular meeting. The minutes of each meeting shall be signed by the secretary and by the presiding officer of such meeting.

He shall give notice of both regular and special meetings, as required by these by-laws, to each member of the board and to such others as the board may direct, and shall within forty-eight hours after each meeting, send a copy of the minutes of the meeting to each member of the board and to such others as the board may direct.

He shall, with the president, sign all orders on the treasurer in payment of bills and claims.

In addition to the duties provided by law, the secretary of the board shall be charged with the following duties:

1. He shall have immediate charge of the accounting and bookkeeping department of the district.

2. He shall perform the duties of purchasing agent and shall receive, store, and distribute all books, supplies, apparatus, and other material and appliances under the direction of the superintendent.

3. He shall prepare the list of claims against the district to be acted upon by the board at its regular monthly meeting. Duplicate copies of each list of claims shall be furnished to each member of the board.

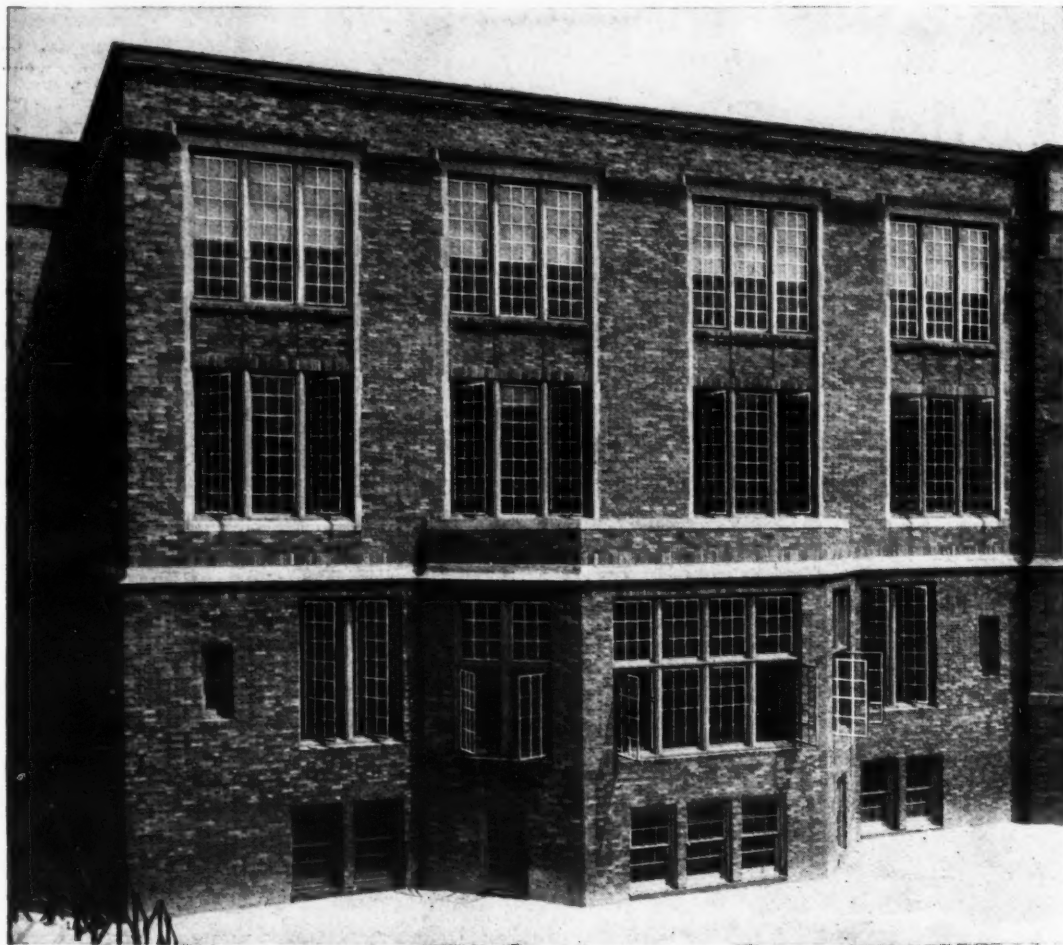
4. He shall prepare and keep on file an inventory of all books, supplies, apparatus, and other materials belonging to the school district, which shall be open to inspection of the superintendent and the school board. He shall submit any other reports through the superintendent of schools relative to his work as business manager of the board and in such form as the superintendent may direct.

5. He shall cause the property of the district to be insured in the name of the district in such amount and with such agents as the board may direct and keep a record of all insurance.

6. He shall submit to the board and to the superintendent a monthly report of receipts, disbursements, and budget balances at each regular meeting in July of each year.

Duties of the Superintendent. 1. The superintendent shall be the chief administrative officer of the board for the management of the schools. He shall, under the direction of the board, make and promulgate such rules and regulations not in conflict with law or these by-laws, as he shall deem desirable for the operation of the schools and shall decide all questions of administrative detail.

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The Coventry School, Cleveland, Ohio. John H. Graham & Co., Architects. F. H. Vogel, Contractor.

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2. The superintendent shall recommend for appointment or election all supervisors, principals, teachers, and other employees of the district, and shall furnish the committee of the whole with evidence of their qualifications to fill the position for which he recommends them. Upon request he shall present to the committee of the whole the qualifications of other applicants for the position to be filled.

All applications for positions shall be made to the superintendent. Such applications shall be dated and numbered in the order received. A list of applications received shall be kept, and duplicate copies of this list shall be supplied to the members of the board.

3. He shall recommend for discharge or retirement any employees under his direction whose services are unsatisfactory, subject to the approval of the committee of the whole.

4. He shall recommend textbooks, instructional supplies, apparatus, and equipment.

5. He shall, in conference with supervisors, principals, and teachers, prepare the content of each course of study authorized by the board.

6. He shall direct the supervision of instruction in the elementary, junior and senior high schools, and all special schools, and the supervision of auxiliary agencies of the schools, and extra-curricular activities.

7. He shall, upon the approval of the board, assign principals, teachers, janitors, nurses, and other employees of the board to the schools; he shall transfer them from one school to another when such seems to be for the best interests of the schools.

8. He shall keep an efficiency record of principals, teachers, and other employees.

9. He shall keep himself informed by study, visitation, and attendance upon state and national educational meetings, concerning the important educational movements, and report the same to the board.

10. It shall be his duty to attend all meetings of the board unless specially excused, and to keep the board at all times fully informed, and advised as to the condition of its affairs, bringing seasonably to its attention such matters as require action by the board, and giving effect to such action unless otherwise determined by the board.

11. He shall be responsible for the operation and maintenance of the buildings and equipment of

the schools, the maintenance of the grounds, the purchase and distribution of the school supplies, material, and equipment.

12. He shall be responsible for the examination and approval for payment of all bills and claims against the district.

13. He shall prepare and bring before the board at its regular April meeting, for its consideration and approval, estimates of the cost of maintaining the schools for the ensuing year.

14. At each regular meeting of the board he shall report the general condition of the schools and at the regular annual meeting in July of each year, shall make a summarized report covering the previous year.

15. All formal reports from the superintendent and all recommendations upon which he desires action by the board shall be submitted in writing and shall be signed by him.

Duties of the Superintendent of Buildings.

1. The superintendent of buildings and grounds shall be the responsible agent of the board of education in the construction, alteration, and repair of buildings in accordance with plans and specifications approved by the board. In cases where the work is done by contract and under the direction of an architect employed by the board, he shall act as the agent of the board in the inspection of such work.

2. He shall recommend to the superintendent from the list of applicants such janitors and other employees as shall be needed for continuous employ,

YOUTH AND CRIME

Who is responsible for the fact that youth is an outstanding contributor to felony and law defiance? Certainly not youth alone. Youth did not choose its parents, its home or the social conditions and standards in which it moves. When youth first became conscious of itself it had parents, a home, and was in a world of matter and spirit. Youth has had nothing to do with its heredity and little to do with its environment. Our youth is the clay which adults have molded.

It is clear that our adult generation is largely responsible for our young lawbreakers. It is our world. We made it.—Henry Noble Sherwood, Indiana.

and shall have authority to employ for brief periods such workmen as are immediately necessary.

3. He shall prepare and keep on file an inventory of all furniture, tools, repair supplies, and other materials, which inventory at all times shall be open to the inspection of the superintendent and the board of education. A copy of the inventory must be filed with the secretary of the board annually on the first day of July. He shall make such reports and in such form as the superintendent may direct.

4. He shall be responsible to the board, through the superintendent, for the maintenance and operation of the heating and ventilating plants, and for all mechanical equipment in the schools, and for the cleaning and heating of the buildings.

5. He shall keep a record of the fuel, light, power, water, and other materials used in the several buildings, showing the amount of each commodity used, and in such form as the superintendent may require, to show the efficiency of the several plants, the efficiency of the employees, and shall make a monthly report of the same.

Duties of the Cafeteria Manager. 1. It shall be the duty of the cafeteria manager to be the custodian of all cafeteria supplies and equipment, to purchase all food and current supplies making payment therefor from cafeteria receipts. To make a complete financial report to the superintendent on or before the seventh of each month.

2. It shall be her duty to arrange the plan of keeping the necessary accounts and the handling of cash receipts in each cafeteria, and to require a settlement with each cafeteria manager at least once a month.

3. It shall be her duty to employ and discharge all junior cafeteria managers, cooks, maids, etc., with the exception of janitors, needed in the department.

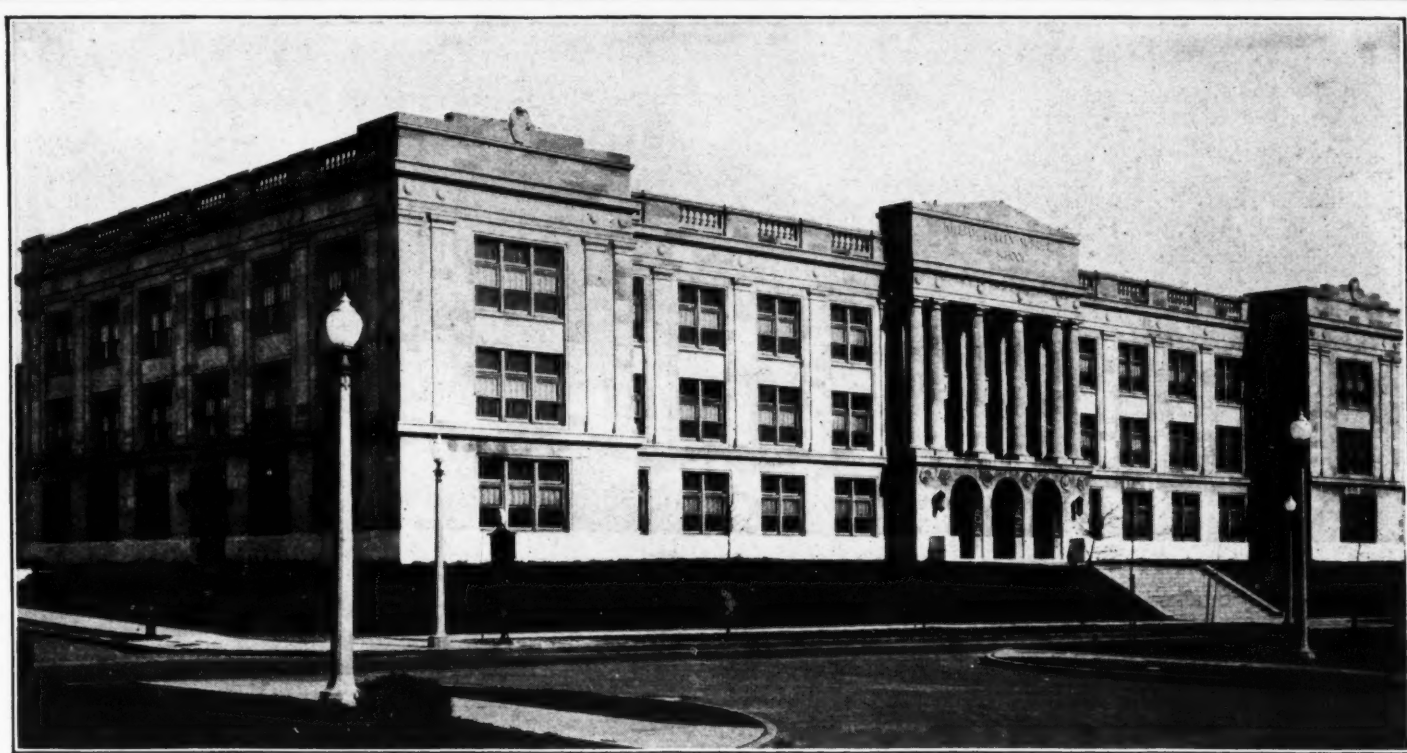
4. She shall execute a bond in the sum of one thousand dollars, conditioned upon the satisfactory performance of her duties, and the turning over to the board of all money, and property for which she is responsible at the termination of her contract.

Policies and Procedures. The teacher is responsible for the classroom and the pupils assigned to her.

The principal is responsible for the pupils and teachers in the building and is the first to be called

(Concluded on Page 84)

The NATION'S BUILDING STONE



Wm. Cullen McBride High School, St. Louis, Mo. Henry P. Hess, Architect
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THE fine light-colored appearance of Indiana Limestone forms so pleasing a contrast when used with walls of other material that Indiana Limestone has become practically the standard trim for the modern school building.

But new ways of using Indiana Limestone have so reduced its cost that many high schools today are being built with all-stone exteriors. In this, they are following the example of college buildings the country over, which in turn conform to the ancient European tradition of natural stone buildings for institutions of learning.

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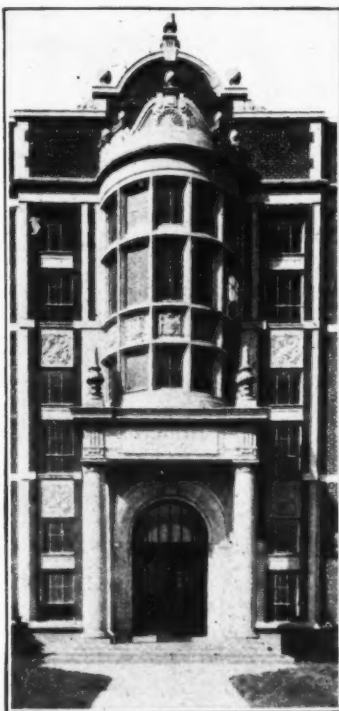
The lowest in cost of natural stones, it is regarded by building authorities everywhere as combining beauty with true economy.

Exterior upkeep cost is extremely low on walls faced with Indiana Limestone. Such buildings remain beautiful year after year without expensive cleaning or costly repairs.

Many of the finest educational buildings in the country are built of the product of this company's quarries.

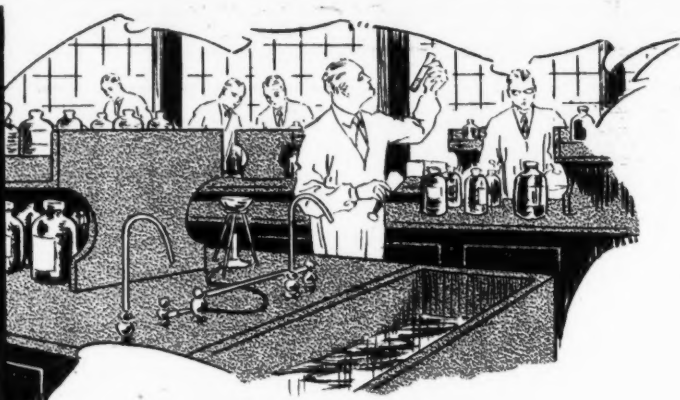
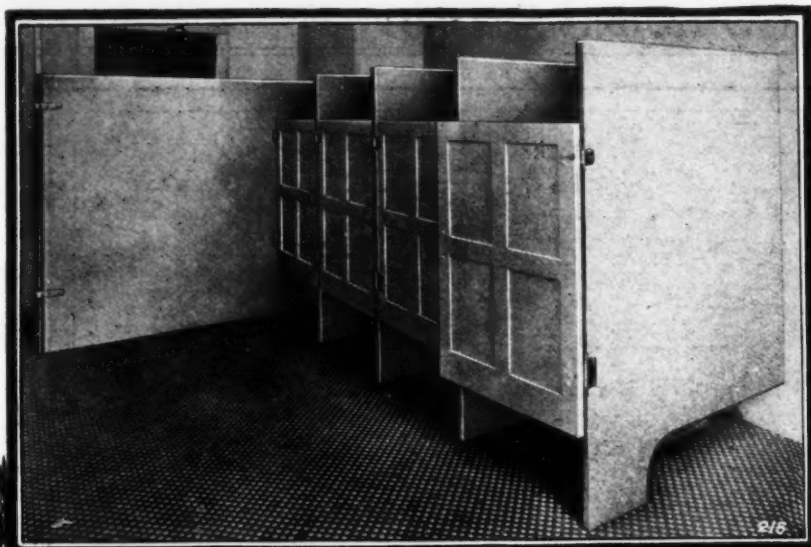
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(Concluded from Page 82)

upon for adjustments between pupil, teacher, and parent.

The janitor is under the direction of the principal so far as the immediate needs for service are concerned. He is under the supervision of the superintendent of buildings and grounds to whom the first report is to be made in case of failure to properly perform his duties.

The supervisors of special departments are in charge of the teachers' work in their respective departments, but must not trespass upon each other's time allotments nor upon the regular class-work. They must cooperate with the principals and with the general supervisor of elementary schools.

The supervisor of elementary schools is responsible under the direction of the superintendent for the supervision and administration of the curriculum and the progress of pupils in the elementary schools.

The superintendent is responsible to the board of education for the effective operation of the entire school plant, for the organization and administration of the course of study and the progress of the pupils through the schools; for the satisfactory performance of duties of all employees, and for the preliminary consideration of all requests, complaints, and recommendations affecting the management of the schools upon which his advice is sought.

The final authority in all matters affecting the independent school district is the board of education, subject to such appeal to the courts, and to county and state superintendents as provided by law.

SCHOOL LAW

Schools and School Districts

The Mississippi law authorizing the creation of a consolidated school district is held constitutional. (Laws Miss. 1924, c. 283, § 100; Constitution U. S. Amendment 14.)—Board of Supervisors of Marshall County v. Brown, 111 Southern Reporter, 831.

The Mississippi order of a school board, when creating consolidated district, becomes effective on date of the order and merger.—Blue v. Board of

Supervisors of Calhoun County, 111 Southern Reporter, 737.

School District Government

The orders of a district superintendent within his jurisdiction, affirmed by the commissioner of education, are not subject to judicial review.—People ex rel. Cherry v. Graves, 220 New York State, 414, New York Appellate Division.

The legislature is held to have placed educational affairs under jurisdiction of the department of education, under statute (revised statutes 1925, arts. 2656, 2657).—Johnson v. City of Dallas, 291, Southwestern Reporter, 972, Texas Civil Appellate.

A formal finding of the police jury that a ward was entitled to additional school-board members by virtue of a ward's increased population gave person appointed prima facie right to membership (Act. No. 279 of 1908; Act No. 100 of 1922, § 17).—Thomas v. Doughty, 111 Southern Reporter, 681, La.

The county board of public instruction, regardless of lack of statute, authorizing it to sue and be sued, has certain limited powers and limited obligations. (Florida revised general statutes, 1920, §§ 41, 447, 454, 458).—First National Bank v. Board of Public Instruction for Lafayette County, 111 Southern Reporter, 521, Fla.

The trustees of an independent school district, selected pursuant to election ordered outside district in disregard of regularly held election, are held not entitled to office.—Keyker v. Watson, 291 Southwestern Reporter 957, Texas Civil Appellate.

A liability on the bond of the treasurer of a school district is held to extend only to branches of duty occurring during the term of bond (Complete statutes, 1921, § 10404).—New Amsterdam Casualty Co. v. Board of Education of Consolidated School Dist. No. 1 of Nowata County, 253 Pacific Reporter 1012, Okla.

Where a bank having funds of a school district suspends during the term of treasurer's bond, liability arises thereon. (Oklahoma Constitution, art. 23, § 10; complete statutes 1921, §§ 8577, 8634, 10387, 10433).—New Amsterdam Casualty Co. v. Board of Education of Consolidated School Dist. No. 1 of Nowata County, 253 Pacific Reporter 1012, Okla.

Where a suspended bank, having school funds, reopened, the new treasurer took office without bond, and the bank again closed, it is held that surety of former treasurer was not liable.—New

Amsterdam Casualty Co. v. Board of Education of Consolidated School Dist. No. 1 of Nowata County, 253 Pacific Reporter 1012, Okla.

A school district treasurer and surety are held liable for funds lost through failure of depository bank of which the treasurer was cashier (South Dakota Laws 1921, c. 335).—Independent School Dist. of Lake Andes v. Scott, 212 Northwestern Reporter 863, S. Dak.

School District Property

The California statute authorizing the sale of school property, on which no public school is being maintained, includes public high schools (Calif. Pol. Code, §§ 1663, 1720, and 1617½ [St. 1917, p. 1645], as amended by California statutes 1919, p. 399; Const., art. 9, § 6).—Los Angeles City School Dist. of Los Angeles County v. Odell, 254 Pacific Reporter, 570, Calif.

A city school district's contract for the sale of realty occupied by the high school is held not void, where the lease to the high-school district expired before date for delivery of title and possession (Calif. Pol. Code, § 1617½ [Statutes 1917, p. 1645], as amended by statutes 1919, p. 399).—Los Angeles City School Dist. of Los Angeles County v. Odell, 254 Pacific Reporter 570, Calif.

The failure of a school board to locate a school-house is held fatal to creation of consolidated district (Miss. Laws 1924, c. 283, § 100).—Board of Supervisors of Marshall County v. Brown, 111 Southern Reporter 831, Miss.

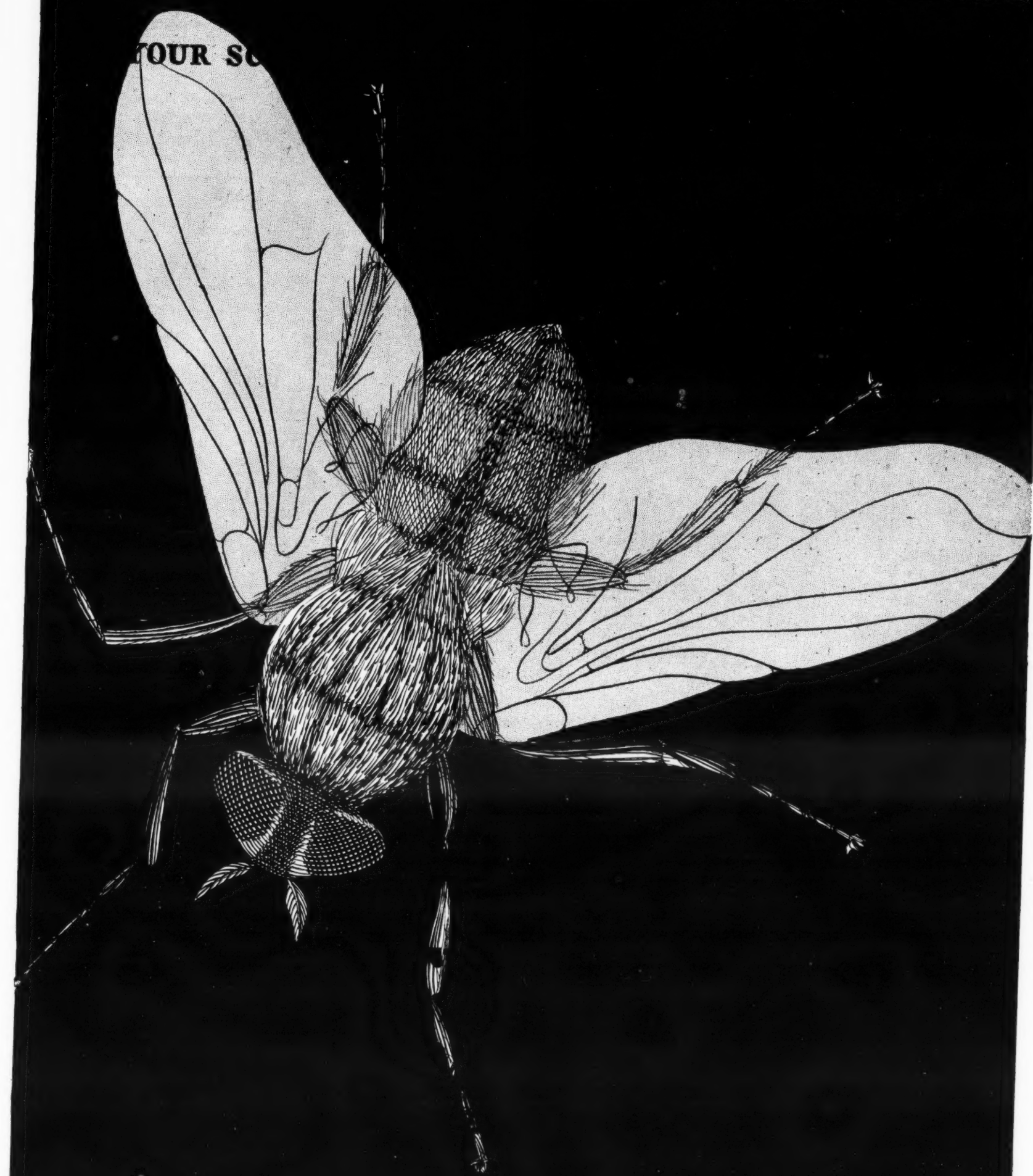
In the absence of statutory restriction, a school janitor may be discharged at any time without liability for salary to the end of the month.—Oikari v. Independent School Dist. No. 40, St. Louis County, 212 Northwestern Reporter 598, Minn.

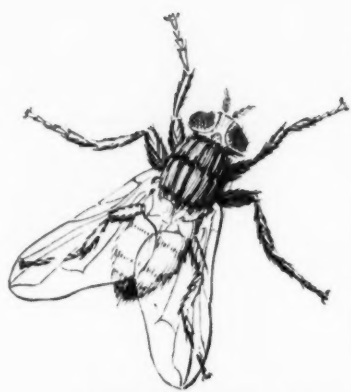
The county board of public instruction may enter into a binding contract to pay expenses incident to erecting schoolhouses (Florida revised general statutes 1920, §§ 441, 447, 454).—First National Bank v. Board of Public Instruction for Lafayette County, 111 Southern Reporter 521, Fla.

The county board of public instruction may buy school supplies and furniture. (Florida Revised Statutes, 1920, §§ 441, 447, 454, 458).—First National Bank v. Board of Public Instruction for Lafayette County, 111 Southern Reporter 521, Fla.

A board of a common school district may contract to remodel the schoolhouse to provide for heating, water supply, and toilet facilities without submitting the proposition to vote (N. Dak. Comp.

TOUR SC

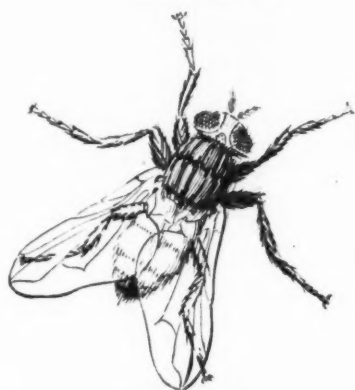




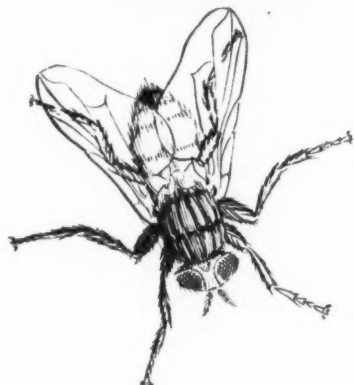
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Children Forget

THE ordinary closet can be more dangerous than a stick of dynamite—in any school. Permit it to stand unflushed—as careless, forgetful childish hands will often leave it—and the closet becomes an attractive lure for swarms of flies.

From the closet they travel to the drinking fountain edge, the lunch box, the hands and lips of children—always leaving behind the danger of infection, disease and even death.

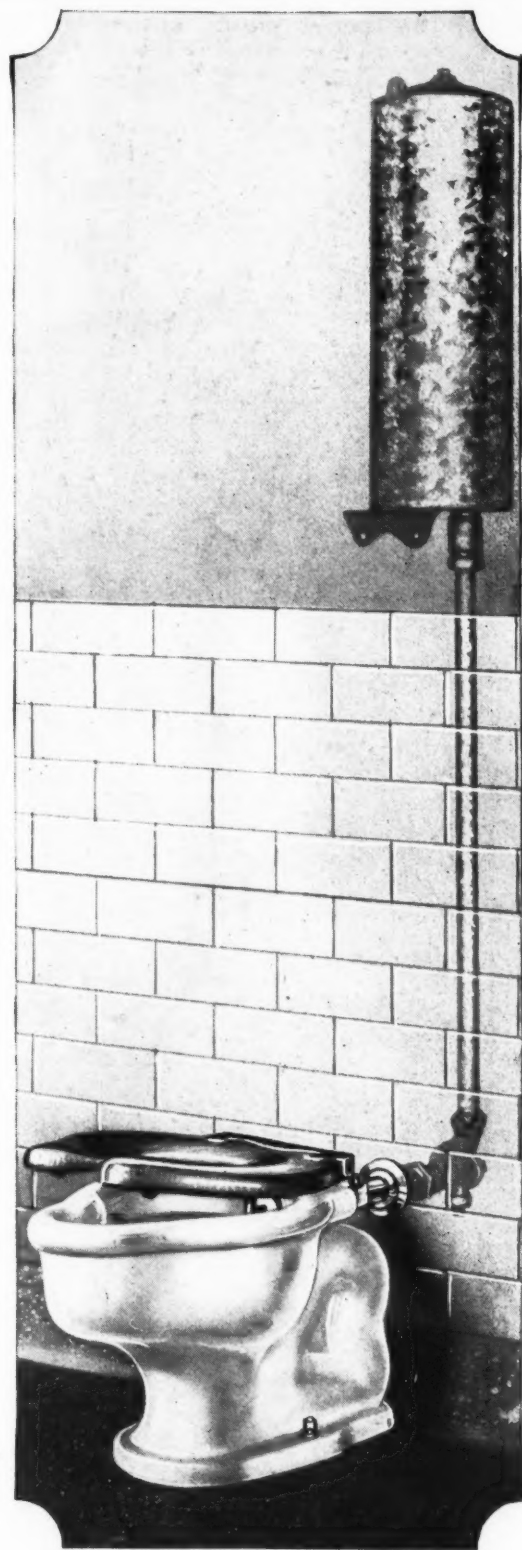
Sure, Automatic Flush Ends These Dangers

The Clow Automatic Closet ends these dangers—for it ends all possibility of forgetful children leaving closets unflushed. The Clow Automatic flushes itself *automatically* after every occupation. A fast, sure flood of water—with the pressure of a thirty-foot standpipe—scours the entire bowl.

The Clow Automatic bowl is designed to distribute this high pressure equally to both rim and trap. The only bowl designed for automatic flushing—it insures a complete cleansing every time the closet is used.

Smaller Water Consumption

Actual tests show that the Clow closed-top tank and the Clow-Madden Valve use less



One of the forty-eight Clow Automatic Closets shown in our catalogue. The closed-top tank may be placed behind the back wall, in a utility corridor.

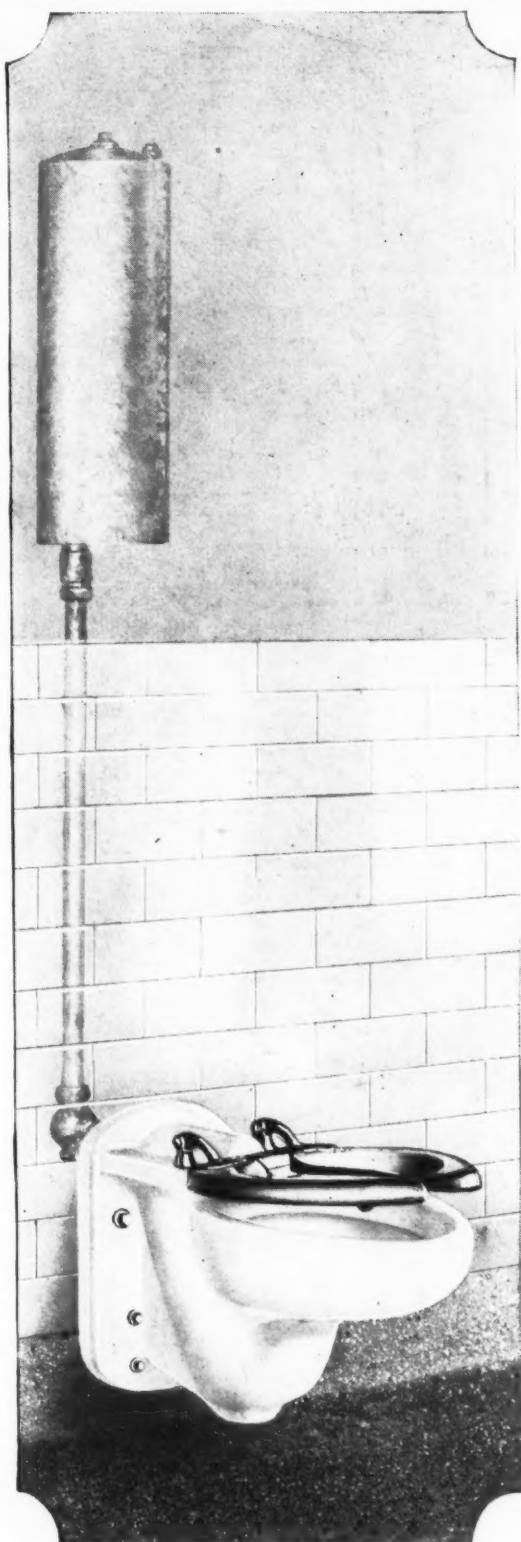
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AUTOMATIC CLOSET

Forty-Eight Styles, Heights and Types to Meet Your Requirements

of Disease and Death

Clow Automatic Closets



The Clow Automatic Closet in the new stack-hung type. The tank space behind the wall can be used as venting corridor—as shown in this picture.

Clow Automatics Never Forget

water, but due to pressure and the design of the bowl it is scoured completely by each flush.

Lower Repair Costs

The sure-acting Madden Valve is simply constructed. It has no intricate valves and floats to get out of order. It is concealed in the ware and cannot be kicked and broken by thoughtless children. It has no chains that can be added to some ambitious boy's collection.

They Last For Years

Your plumbing costs but 10% of your entire building. The building will last 75 years or more. Your plumbing has the hardest usage of any part of your plant. Poor plumbing will last, at most, 10 years, and cause continuous trouble and great expense during that time for replacements.

We have records of Clow Automatics still giving service after 39 years of usage.

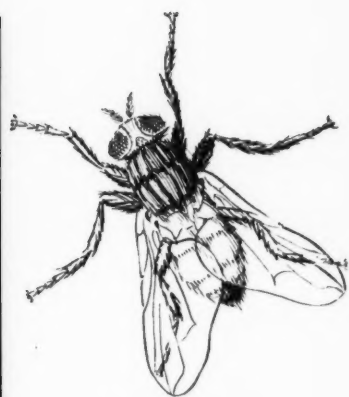
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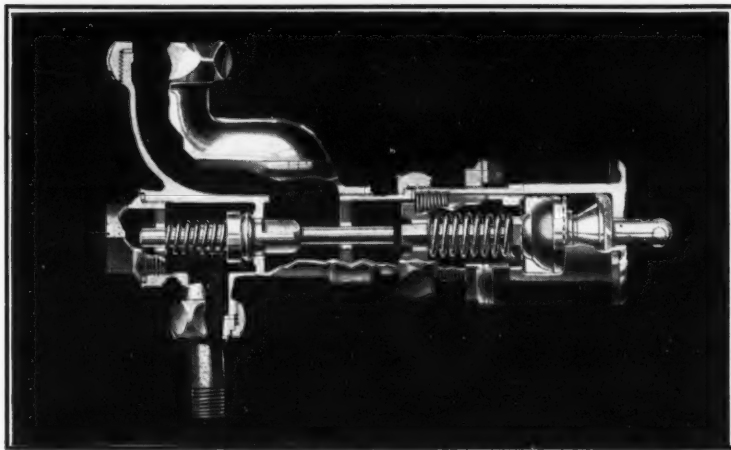
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Surer Sanitation— Better Appearance —for the life of the school!

BECAUSE of the simplicity of construction—the elimination of complicated valves and floats—the Madden Valve keeps the Clow Automatic in cost-free service for the life of the school. Notice, in the illustration shown below, the extreme simplicity of the entire Clow Valve assembly. There are but two moving parts.

Madden Valves and their parts are made of the very best brass—with stems of bronze metal for strength. Even the washers—the only point of wear—are made of the finest quality rubber obtainable.



The Clow-Madden Valve. Note the simplicity of the whole assembly—with but two moving parts.

Clow bowls are made of Adamantose Ware—the hardest fired, and most thoroughly vitreous earthenware body on the market. This strong, durable material will withstand the action of virtually every acid, and last almost forever.

Compare the weight of the Clow Automatic Bowl which varies from 50 to 60 lbs. with competitive fixtures. These bowls are designed to avoid breakage. It costs a lot of money to replace a closet.

Clow Automatic Closets are good looking. We recommend a utility corridor in every school toilet room where all parts can be easily reached, tanks concealed and vents arranged for each closet.

All nicked parts are heavily plated. The quartered oak seats retain their appearance, and are furnished in crescent as well as the closed style.

Send—without obligation—for our “Clow School Plumbing Catalogue,” which tells more about assuring sanitation of the life of the school.

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AUTOMATIC CLOSETS



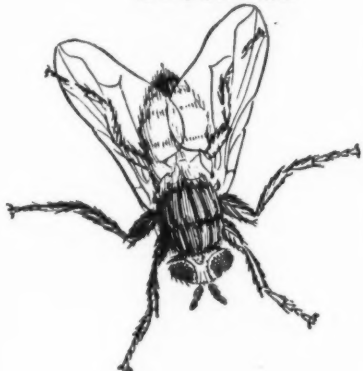
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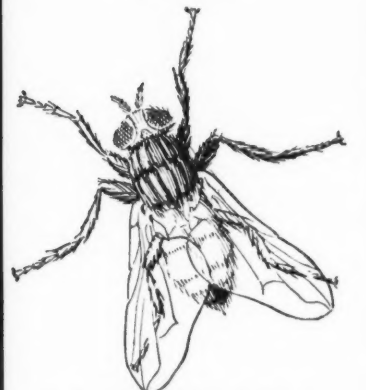
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Clean, cool and invigorating is the water that flows from Rundle-Spence Vertico-Slant Fountains. Always—first for thirst—during all seasons. A prime necessity for school buildings and playgrounds.

Sanitary above all! Lips can't touch the R-S nozzle. The slight, slant stream prevents water from falling back upon the jet, R-S Fountains take up little room—fit into any surrounding—and give years of continuous service.

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Handsome, vitreous, china, one-piece fountain. Combines all the conveniences of the vertical stream with the special, slanting stream feature. Glass or cup may easily be filled from it.



C 147

A pedestal fixture of galvanized pipe with extra heavy vitreous China bowl and vertico-slant stream. An extra strong fountain for the playground.

Laws 1913, §§ 1173, 1175, 1184, 1186).—Ellington v. Cherry Lake School Dist., 212 Northwestern Reporter 773, N. Dak.

A provision in the specifications for an addition to a school that decision of architect, trustee, and advisory board should control necessary changes is held valid.—Wilkins v. Newkirk, 155 Northeastern Reporter 516, Ind. App.

Patented articles cannot be exclusively specified, in specifications for an addition to a school building.—Wilkins v. Newkirk, 155 Northeastern Reporter 516, Ind. App.

That certain articles were specified as standard by which contractors were required to build on building an addition to a school building is held not to invalidate the contract.—Wilkins v. Newkirk, 155 Northeastern Reporter 516, Ind. App.

A board of education is held liable to a contractor for work under a bid accepted by an unauthorized agent held out by the board as having authority.—Grant v. Board of Education of City of Bayonne, 136 Atlantic Reporter 713, N. J. Sup.

"Responsible" as in "lowest responsible bidder" includes integrity, skill, ability, and capacity to perform particular work (N. Dak. Comp. Laws 1913, § 1356).—Ellington v. Cherry Lake School Dist., 212 Northwestern Reporter 773, N. Dak.

A school board's determination as to who is lowest responsible bidder for the contract cannot ordinarily be set aside unless the board's action is arbitrary. (N. Dak. Comp. Laws 1913, § 1356).—Ellington v. Cherry Lake School Dist., 212 Northwestern Reporter 773, N. Dak.

The board of education was responsible for materials furnished on its orders, after undertaking to complete a schoolhouse which the contractor had failed to complete.—Knott County Board of Education v. Martin, 291 Southwestern Reporter 1062, 218 Ky. 688.

A board of education was not responsible for building materials furnished an association which contracted to build the schoolhouse.—Knott County Board of Education v. Martin, 291 Southwestern Reporter 1062, 218 Ky. 688.

The seller of material to a company reselling to contractors not giving bond might not recover from contractors because the material was used in the school building (N. C. C. S. 2445, as amended).—A. T. Griffin Mfg. Co. v. Bray, 137 Southeastern Reporter 151, N. C.

A public-school building could not be subjected to lien for material sold to contractors.—A. T. Griffin Mfg. Co. v. Bray, 137 Southeastern Reporter 151, N. C.

The seller of material used in a school building cannot recover from the school authorities (C. S. 2445, as amended).—A. T. Griffin Mfg. Co. v. Bray, 137 Southeastern Reporter 151, N. C.

The school district has the burden of showing the invalidity of a contract for construction of buildings as exceeding the constitutional debt limitation (Wis. Const. art. 11, § 3).—Riesen v. School Dist. No. 4 of Village of Shorewood, 212 Northwestern Reporter 783, Wis.

Taxation

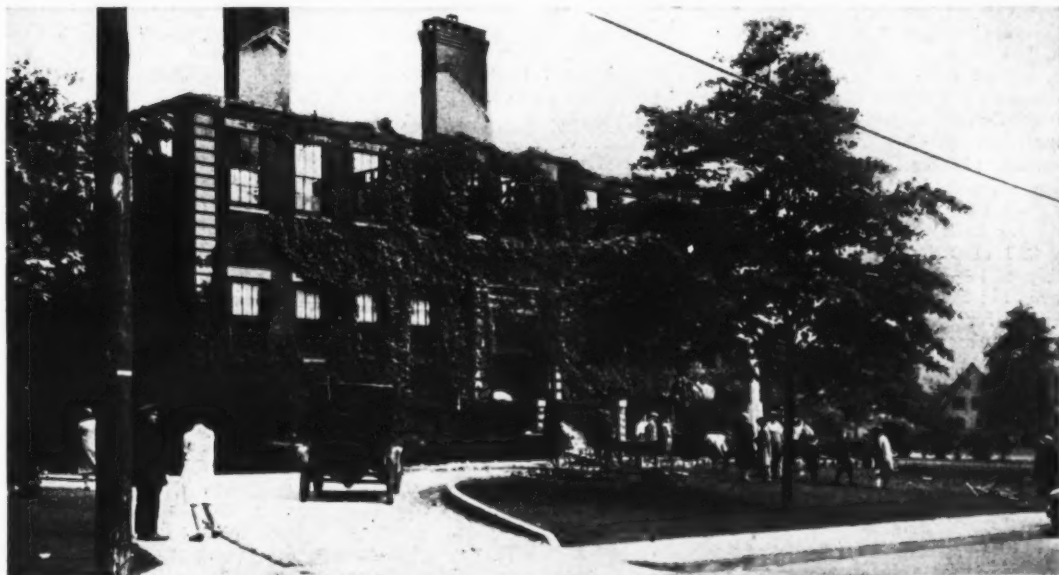
The county board of public instruction may buy school supplies and furniture, and, within the limitations prescribed, may borrow money (Fla. revised general statutes 1920, §§441, 447, 454, 458).—First National Bank v. Board of Public Instruction

for Lafayette County, 111 Southern Reporter 521, Fla.

Funds for maintenance and operation, advanced for other obligations, constitute the debt "liability" of a school district, in determining constitutional debt limitation (Wis. Const. art. 11, § 3).—Riesen v. School Dist. No. 4 of Village of Shorewood, 212 Northwestern Reporter 783, Wis.

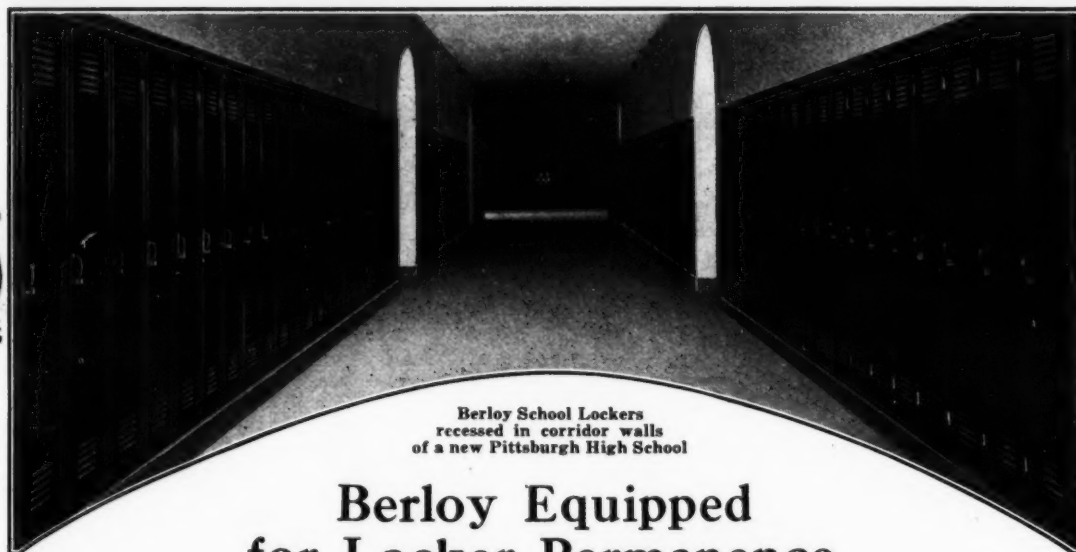
Money owing by a school district to the state at the time of contracting for buildings must be considered as a liability in determining the debt limitation, although not appearing on the books (Wis. Const. art. 11, § 3).—Riesen v. School Dist. No. 4 of Village of Shorewood, 212 Northwestern Reporter 783, Wis.

Temporary loans by a school district in anticipation of revenues constitute "indebtedness" within the constitutional limitation (Wis. Const. art. 11, § 3).—Riesen v. School Dist. No. 4 of Village of Shorewood, 212 Northwestern Reporter 783, Wis.



DOES FIREPROOFING PAY?

Pupils at Ridgewood, N. J., had a premature vacation forced on them when the schoolhouse was destroyed by flames. (International Newsreel Photo.)



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		Jacksonville	Long Island City		

A constitutional debt limitation cannot be waived by school-district authorities (Wis. Const. art. 11, § 3).—Riesen v. School Dist. No. 4 of Village of Shorewood, 212 Northwestern Reporter 783, . . . s.

A determination whether an emergency exists to issue bonds for building an addition to a school is exclusively for the advisory board of the school township.—Wilkins v. Newkirk, 155 Northwestern Reporter 516, Ind. App.

The state tax board's determination, fixing the amount of bonds for building an addition to a school, is held not to preclude subsequent proceeding for a larger amount.—Wilkins v. Newkirk, 155 Northwestern Reporter 516, Ind. App.

Notice to the members of the advisory board of a school township, showing time, place, and purpose of a meeting at which an emergency was declared to issue bonds, is held sufficient.—Wilkins v. Newkirk, 155 Northwestern Reporter 516, Ind. App.

The proceedings for an addition to a school building are held not invalidated because the tax board ordered a \$56,000 bond issue after bids were submitted, though it previously was set at \$55,000.—Wilkins v. Newkirk, 155 Northwestern Reporter 516, Ind. App.

A school tax under the act providing for an election to determine its validity approved by over two thirds of the qualified voters, is held valid (Ga. Laws 1909, pp. 1103, 1107, §§ 2, 10, 12).—McCall v. Freeman, 137 Southeastern Reporter 397, Ga.

The failure of a school board to hold an election at two precincts with sufficient voters to change the result is held to invalidate an election (La. Act No. 256 of 1910, §§ 9, 13; Act No. 46 of 1921, § 17, 20).—White v. Livingston Parish School Board, 111 Southern Reporter 700, La.

Funds for school maintenance and operation cannot be diverted for building schoolhouses (Wis. St. 1925, §§ 40.25, 40.26).—Riesen v. School Dist. No. 4 of Village of Shorewood, 212 Northwestern Reporter 783, Wis.

Residents and taxpayers of a ward, not claimants to office, and having no special interest therein, could not oust a school-board appointee having apparent title (La. Act No. 279, of 1908; Act No. 100 of 1922, § 17).—Thomas v. Doughty, 111 Southern Reporter 681, La.

Any right of taxpayers to sue the officers of a school district to restrain waste of public funds is statutory.—Brooks v. Wyman, 220 New York State 751, 128 Misc. Reporter 42, N. Y. App. Div.

School District Claims

Interest on a claim against a board of education is recoverable only from date of demand.—Poucher v. Board of Education of City of New York, 220 New York State 312, 128 Misc. Reporter 853, N. Y. Sup.

Interest on a salary claim against a board of education will be denied, in absence of evidence when demand for payment was made.—Poucher v. Board of Education of City of New York, 220 New York State 312, 128 Misc. Reporter 853, N. Y. Sup.

A statute authorizing actions against public corporations inhibits an action against a school district for an act or omission in governmental capacity (Oregon Laws, § 358).—Spencer v. School Dist. No. 1, 254 Pacific Reporter 357, Ore.

Teacher

A valid contract of a school teacher employed by the subdirector must be signed by president of the board and filed with the secretary (Code 1924, §§ 4228, 4229).—Shackelford v. District Tp. of Beaver, Polk County, 212 Northwestern Reporter 467, Iowa.

Pupils' Conduct and Discipline

Requiring vaccination of pupils is held within the jurisdiction of a local school board under the city charter.—Johnson v. City of Dallas, 291 Southwestern Reporter 972, Texas Civil App.

Recent Oregon School-Law Decisions

A schoolhouse in one of the districts of Oregon was destroyed by fire. The school board decided to use the insurance money to satisfy outstanding school warrants, and proceed to the construction of a new school through a bond issue. The attorney-general decided that this was a perfectly legal procedure.

"Has the chairman of a school board the right to vote on all questions, or only in case of a tie vote?" was the query recently propounded to the attorney-general. The latter points to Robert's Rules of Order, which read:

"He is entitled to vote when the vote is by ballot, and in all other cases where the vote would change the result. Thus, in a case where a two-thirds vote is necessary, and his vote thrown with the minority would prevent the adoption of the question, he can cast his vote; so, also, he can vote with the minority when it will produce a tie vote and thus cause the motion to fail."

The following question has also arisen recently: "If a new member is appointed by the present board, does he serve until the annual election or

for the unexpired term of the member who resigned?"

The attorney-general submits the following answer: "When an appointment to fill a vacancy in the office of a director of a district of the first class is made, the appointee holds office until the next school election, and, until his successor has been elected and qualified; and that if the term of the director he was appointed to succeed does not expire on or before the next general school election, a successor to the person appointed to fill the vacancy is to be elected at the next general school election for the unexpired portion of the term of the director whose death, resignation, or removal caused the vacancy."

Recent Wisconsin Decisions

—The Wisconsin Department of Public Instruction has recently ruled that in calculating high-school attendance of nonresident students, the amount due the high-school district must be computed by counting the actual number of days' attendance, not enrollment. The statute authorizes the board to charge not more than \$2 per week. It also provides that five days shall constitute a school week, consequently, the amount due the district may be determined by consulting the school register.

The department has also ruled that the building committee is an advisory committee only. The department points out that a building committee appointed by the chairman or elected by the electors at an annual meeting is simply an advisory committee. Owing to the fact that in many communities there are persons, not members of the school-district board who are fairly or quite competent, and perhaps well informed, in regard to building material, it has been customary to create a building committee of one or more persons.

There is no objection to this action, but it should be clearly understood that the members of such a committee have no authority under the law to enter into contracts or agreements personally for any order for material or anything of the kind, and that any order, drawn upon the district treasurer for the payment of services of members of such a committee are illegal and subjects the district officers who pay them to a severe penalty.

—The Wisconsin legislature has killed the bills seeking to reduce the school age in vocational education from 18 to 16 years.



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"In my opinion the unit system is an easier and less expensive system to install than a central fan system."

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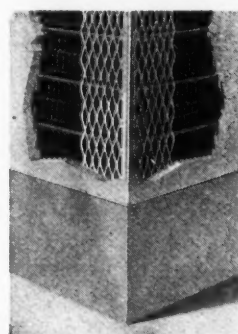
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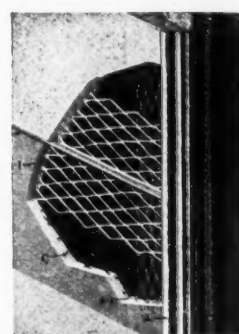
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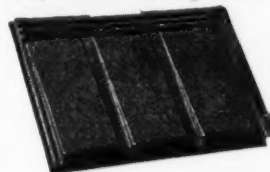
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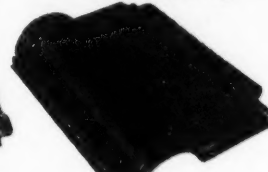
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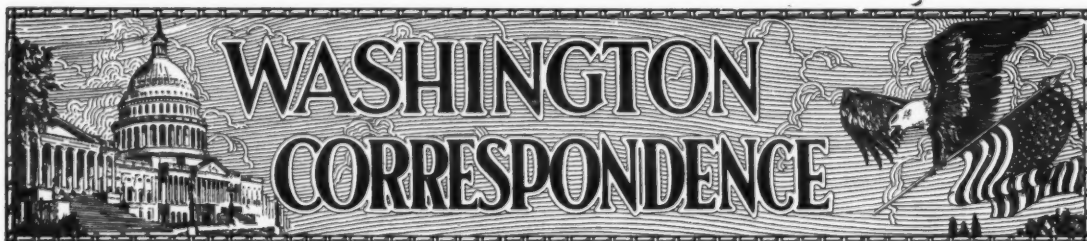
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By A. C. Monahan, Formerly U. S. Bureau of Education
Directory of Commercial and College Laboratories

The Bureau of Standards makes many tests for the government, the industries, and the public. Special provision was made for the government testing in the act of creating the bureau. The volume of this work for the Federal Government makes it impracticable for the bureau to carry out tests for private institutions and individuals if commercial laboratories can do the work. To inform interested persons of the location of other laboratories, the bureau has compiled a directory of the 207 commercial testing laboratories throughout the country, together with indications of the types of commodities which they are prepared to test. Special care has been exercised to make this list complete. It has now been issued in printed form as Miscellaneous Publication No. 90 of the Bureau of Standards and may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 15 cents per copy. Publication was decided upon because of the desirability of making available to all those interested the location of independent testing services throughout the country and in anticipation of a marked increase in the demand for such service in domestic and export trade.

Accompanying the list of commercial testing laboratories there is presented a list of the laboratories of 143 colleges which are used not only for purposes of instruction but also to a considerable extent for research work.

It is believed that the existence of this thoroughly classified directory of testing laboratories will have a number of beneficial effects in promoting the use of specifications, not the least important of which will be the inducement offered to the large number

of purchasers who have hesitated to buy on specifications in the past because no adequate service for checking the quality of deliveries appeared to exist.

An outline is given of the certification plan, in accordance with which there have already been compiled 48 lists of manufacturers who have expressed their willingness to certify to purchasers that material supplied on orders based on the indicated 48 United States Government Master Specifications complies with the requirements and tests of these specifications.

Kindergarten Supervision

A definite tendency toward a greater unification and coordination between the kindergarten and the first grade is becoming evident in all parts of the United States. It is particularly noticeable in the rapidly developing movement for rearranging school supervision so that the kindergarten and primary grades are under the immediate oversight of the same supervisor.

The modern trend in teacher preparation recognizes this tendency and special attention is given to methods of teaching the kindergarten-primary group as a distinct grouping based upon a period of childhood in which similar methods and materials for instruction should be used. This matter has been the subject of a recent study by the U. S. Bureau of Education. The results will be available some time in the near future in a bureau bulletin. This study shows that of 546 cities in the United States from which data were obtained that kindergartens are accepted as a part of the school systems in 338. Eighty per cent of these kindergartens are under definite supervision.

In 34 of the cities reporting, the supervision is for kindergartens only; in 192 of the cities the kindergarten-primary or kindergarten-elementary type of supervision is found. In 44 cities supervision is provided for kindergarten, primary, and

elementary grades in the same system, but each under separate personnel.

In 34 cities which have general supervision for their kindergartens only seem to regard kindergarten work as something that needs particular consideration; perhaps a peculiar work more difficult than ordinary grade work.

The tendency toward the combination of kindergarten with the primary grades in supervision seems to be making greater headway in the central states than in the south or in the east. A larger percentage of the eastern cities seem to have kindergartens but the movement for the definite coordination of their work with the primary grades as indicated by the employment of kindergarten-primary supervisors is making slower headway.

New Personnel in the District of Columbia Schools

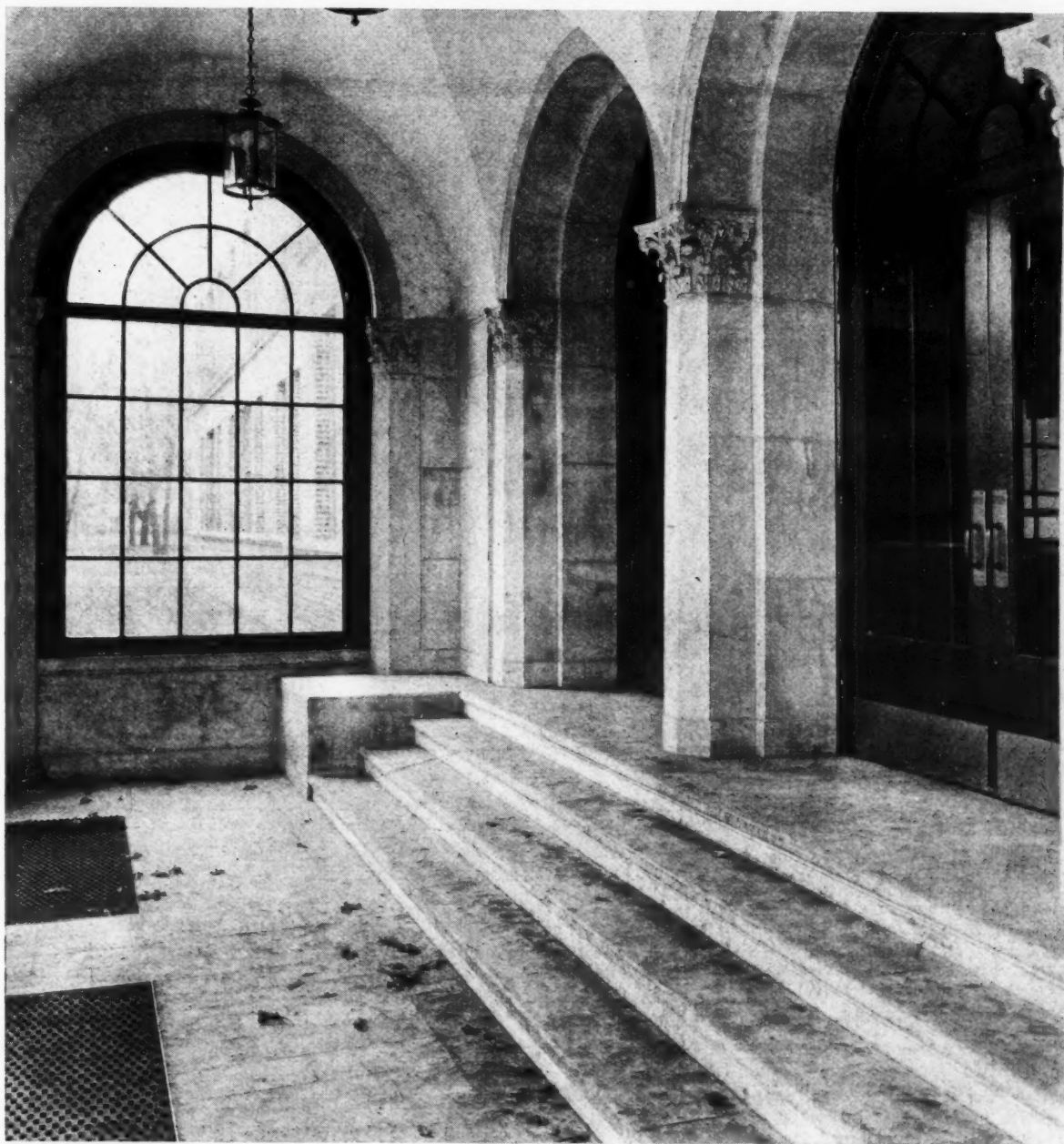
Miss Anna D. Halberg of the Maryland State Normal School at Towson, Maryland, has been selected as principal of the Wilson Normal School of Washington, D. C., to begin service September 1, 1927.

Miss Halberg is a graduate of the State Normal School at Oshkosh, Wisconsin, and holds the degrees of B. S. and A. M. from Teachers' College, Columbia University. She has also pursued graduate work at Teachers' College and Johns Hopkins University in Baltimore.

Miss Halberg's experience consists of three years' teaching in a rural elementary school, two years' teaching in the primary department of a city elementary school followed by two years as principal of a city elementary school. Then followed her work in teacher training, which in amount, quality, and character, is unusual. For two years as teacher of English, history and civics in a county normal school, six years principal of a teacher-training department in two different high schools in Wisconsin, in charge of the demonstration work one summer in the state normal school of Oshkosh, Wisconsin, two years teacher of education and psychology in the Baltimore City Training School for Teachers, and since 1924 director of the student teaching in the State Normal School, Towson, Maryland. Her educational preparation is unusually rich and extensive, including all phases of primary, elementary, and teacher-training education. Added to those is a varied line of academic courses which bespeak wide interest and make for cultural background.

(Concluded on Page 90)

There is No Substitute for Marble

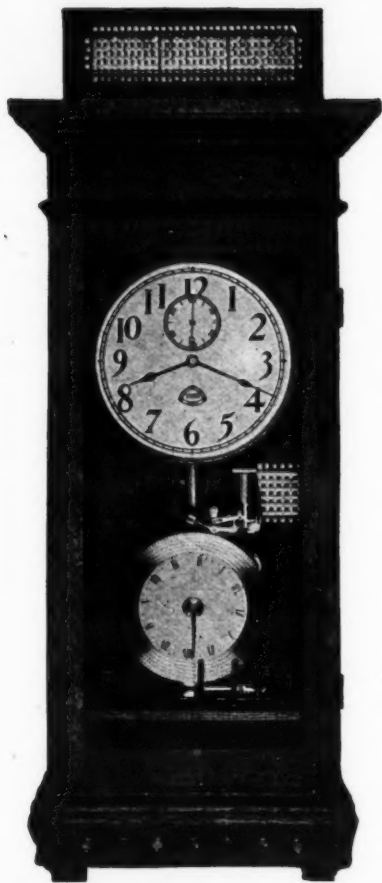


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This appointment is to fill a vacancy caused by the retirement of Miss Anne M. Goding, who has held the position for the past 20 years. Miss Goding has completed a total service of 44 years in the District of Columbia. With this change in the principalship comes also the change in course adopted by the board of education as a result of the recommendations of the U. S. Bureau of Education. The course has been changed from a two-year course to a three-year course with high-school graduation as a requisite for admission. This is done for the double purpose of improving the educational standards of persons selected for teaching positions and also to eliminate the oversupply of graduates of this school available for the vacancies in the school systems.

District of Columbia Board of Education

The Board of Education of the District of Columbia has begun its new year with all members reappointed by the Supreme Court of the District of Columbia. It has reelected all of its present officers, Mr. Charles F. Carusi remaining as president, and Mrs. Wm. H. Herron, vice-president.

Open Trials for Teachers

The right of open trials for public-school teachers alleged to have violated regulations of the school department was established by the District of Columbia board of education at a recent meeting. The question came up through the cases of three teachers on maternity leave of absence held by the personnel committee to have violated the rule governing this leave. These teachers will be given an open trial by the board if they so desire.

According to this decision teachers may demand an open trial wherever dismissed, reduced or disciplined by the school department except in the case of teaching inefficiency. Those who have been lacking in ability as teachers and demoted or discharged for this reason will not be granted an open trial.

A summer term of eight weeks is maintained in approximately 20 schools in the District of Columbia. Nearly five thousand students are enrolled. Included among these are many who are desirous of getting ahead of their grades and others who are back in one or two subjects and desire to catch up. Many of the students enrolled are from private and parochial schools as well as from public schools. This summer term has been in operation for several years and has proved very satisfactory.

RULES AND REGULATIONS OF GRAND-MOTHER'S DAY Eugene Jerel Irwin

A few months ago, among the effects of a well-known California pioneer, a slip of paper was found, which carried the title "Rules and Regulations." These had to do with the rules of a school in Missouri under the direction of R. M. Rhoades, in the year 1863. The original was loaned to the press, the writer having first made a copy, but subsequently the former was accidentally destroyed and so the copy appears here in print for the first time.

These regulations are of interest for a number of reasons. First, they indicate that children of grandmother's day were not unlike those of our day and vexed teachers to about the same extent, and in as many if not more ways than do members of the present generation. Second, it is interesting to note the length of the school day—"School opens at 8 A. M.—school closes at 5 P. M." All penalties meant staying from fifteen minutes to an hour after five o'clock.

Our own belief would be that this school rarely closed its doors before six o'clock. That looks like night work for the janitors also.

For those who claim the modern school is inefficient we would like to ask for a comparative study of the results of the present five-hour day as against the product of the former seven-and-a-half-hour program. And while it isn't logical to suppose that the classroom teacher had to punish students under this schedule for breaking of all the rules, it is safe to assume that discipline was anything but a simple matter. Punishment, however, was swift and according to the carefully-made rules and regulations.

A reading of the rules which follow brings out the type of offenses the teacher had to meet and indicates the relative importance, or gravity, of each as viewed by the master of the school. A little thought upon this is likely to convince one that the boys and girls of our day respond well to the efforts of their teachers and have no more faults than the earlier generations.

RULES AND REGULATIONS

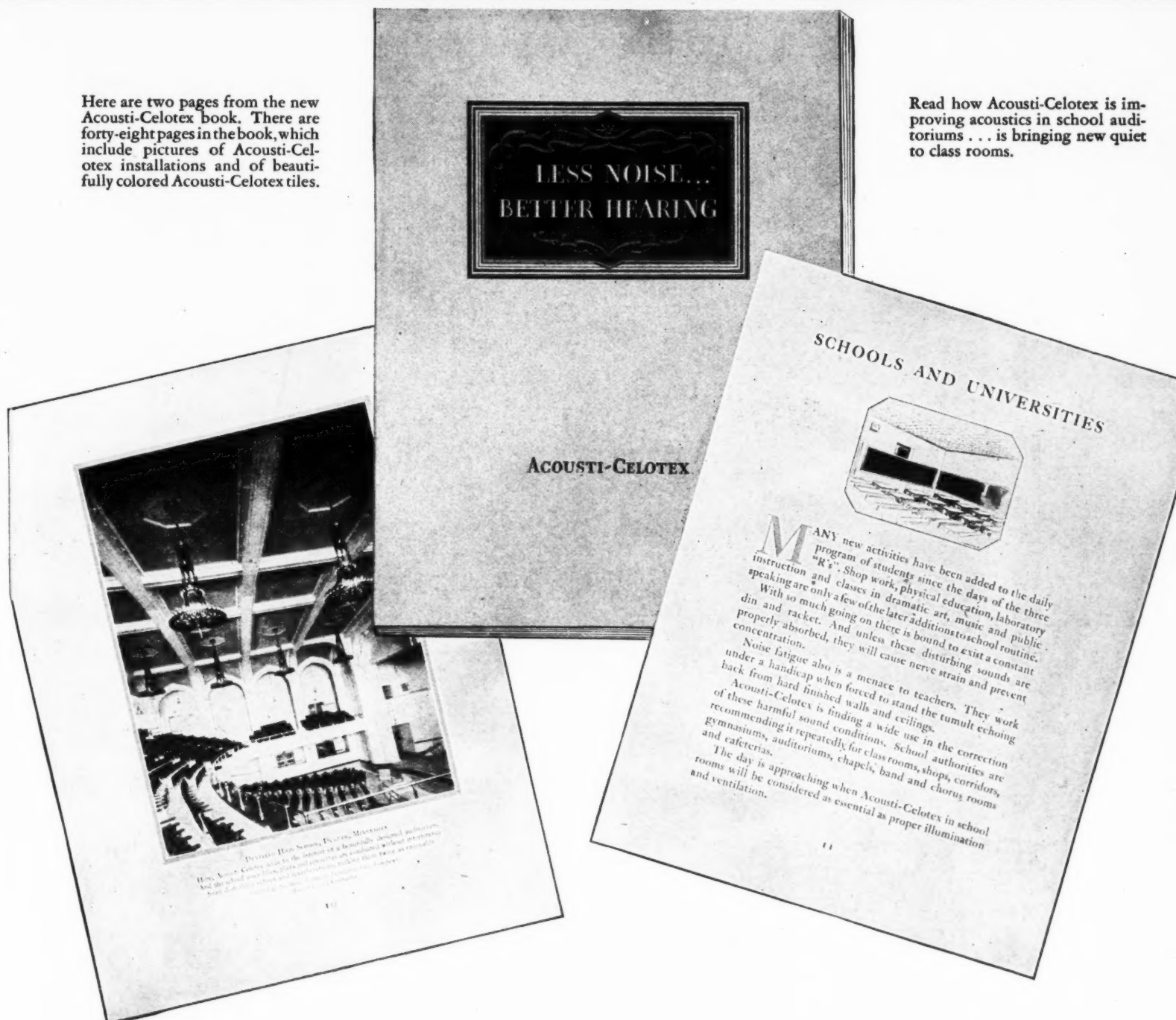
School opens at 8 a. m. Morning recess from 10 to 10:15 a. m.
School closes at 5 p. m. Noon recess from M. to 1:30 p. m. Evening recess from 3:15 to 3:30 p. m.

Offenses				Penalties
Absence from roll-calling.....	Retained after school hours	15	minutes	
Inattention in divine worship.....	" " " "	60	"	
Inattention in recitation.....	" " " "	15	"	
Idleness.....	" " " "	15	"	
Talking in school hours.....	" " " "	15	"	
Laughing in school hours.....	" " " "	15	"	
Gazing out of the windows or door.....	" " " "	15	"	
Changing seats.....	" " " "	15	"	
Leaving the seat without permission.....	" " " "	15	"	
Disrespect to teacher.....	" " " "	45	"	
Disrespect to one another.....	" " " "	30	"	
Disrespect to strangers.....	" " " "	30	"	
Profane language.....	" " " "	60	"	
Indecent language.....	" " " "	45	"	
Fighting.....	" " " "	60	"	
Quarrelling.....	" " " "	30	"	
Intermingling of the sexes at noon.....	" " " "	30	"	
Tale bearing.....	" " " "	30	"	
Leaving school without permission.....	" " " "	45	"	
Trespassing on private grounds.....	" " " "	30	"	
Stopping on the road to or from school.....	" " " "	15	"	
Lying.....	" " " "	60	"	
Failure in recitation.....	Retained until recitation is learned.			
Wanton destruction of property.....	The property to be replaced.			
CONTINUANCE IN OFFENSES.....	SEVERE CHASTISEMENT.			

R. M. RHOADES, Teacher.

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tical problem is analyzed, and a typical job of room quieting is explained. The formulae and methods used in calculating hearing conditions are stated in a clear manner, reduced to their *simplest* terms.

The concluding pages are devoted to technical information and illustrations showing the pleasing decorative possibilities of Acousti-Celotex. All of this is told so as to be easily understood. However, if you wish anything explained, write The Celotex Company, and they will instruct their nearest representative to call on you.

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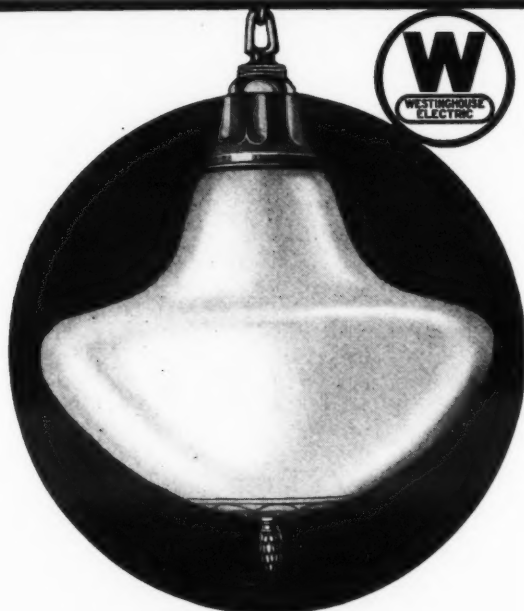
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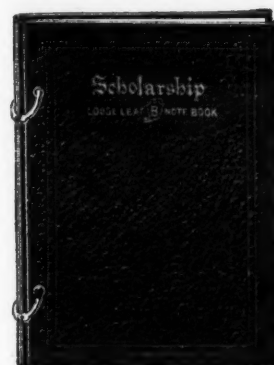
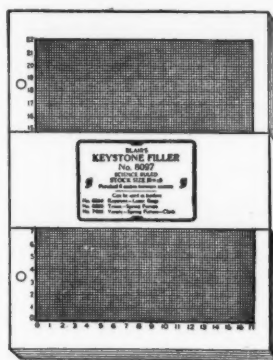
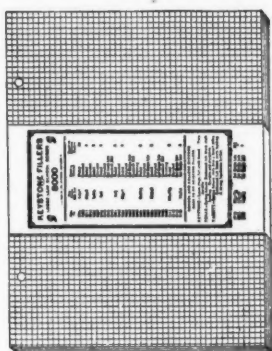
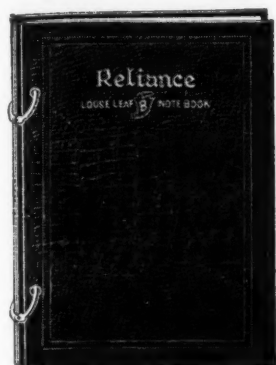
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South Bend Works South Bend, Indiana

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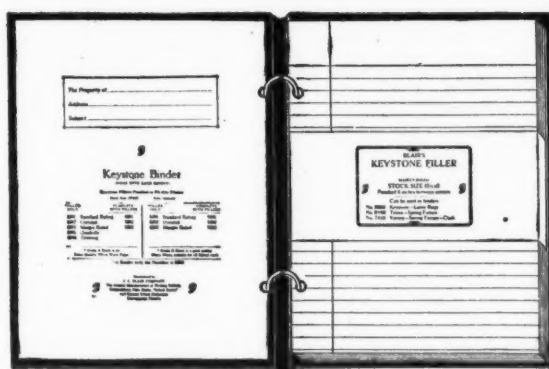
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BUILDING NEWS OF THE SCHOOLS

School construction has been active in the United States in the past two years. New school buildings erected in 281 cities of 10,000 or more population cost \$245,811,715, an average for each city of \$874,775, as shown by a study of recent movements in city-school systems by W. S. Deffenbaugh, chief of the city-school division of the Bureau of Education. Of the buildings erected, 432 were for elementary schools, 165 for junior high schools, and 127 for senior high schools. The average cost of the 724 buildings was \$339,519 per building. If similar activity existed in cities of this size from which no reports were received, 1,380 new school buildings were erected in this country during the biennium, 1924-1926, at a total expenditure of \$714,314,365.

Notwithstanding the great activity in city-school construction, inadequate school facilities necessitated part-time instruction of a number of elementary children in 67 of the 404 cities reporting, and of high-school pupils in nineteen of the cities for which statistics are available.

Dover, N. J. A ten-room elementary school is in process of erection. The building is being erected from plans prepared by Coffin & Coffin, Architects, New York City. It will be completed ready for use in September.

South Pasadena, Calif. A bond issue of \$555,000 was carried by a vote of four to one on June 3. The proceeds of the bond issue will be used for the erection of a junior high school. The building will be completed in September, 1928.

New York, N. Y. Plans have been completed for the new John Adams High School, to be erected on a seven-acre site in Woodhaven. The building which will be erected in the English Renaissance or late Jacobean style, will accommodate 3,696 pupils, and will cost \$2,533,000.

The Bureau of School Buildings of the New York City board of education has recently issued a report showing the results of the activity of the bureau in speeding the planning of new buildings.

The report shows that on June 1 there were 21 elementary-school buildings planned, with a total

of 28,221 sittings and 7 high schools, providing a total of 15,462 sittings. The total of 43,683 sittings is almost twice the total on May 1, 1927, when 24,071 sittings were planned. It is the largest since March, 1927, when the number of sittings planned was 44,517. This latter figure is the highest since April, 1926.

The large provision made for high schools is a recognition of the importance of providing adequately for the enormous increase in the demand for high schooling. Plans for other new high schools and special schools will be placed on the drafting tables of the bureau within a short time. The board of education is getting under way another large school-building program.

The total number of sittings under contract remains about stationary, the total in June, 1927,

being 30,546. There has been little change in the total number of sittings under contract since September, 1925, when the total was 65,484. On October 1, it had dropped to 27,495. New buildings under contract have kept pace with the number of buildings opened, with the result that the fluctuation of sittings under contract has been between 25,000 and 35,000. On June 1, there were 25 new buildings and additions under construction.

The voters at Lancaster, Pa., on April 12, approved a bond issue of \$1,250,000 to enlarge three schools, and to erect a new twelve-room grade school.

Clayton, Mo. The DeMun School will be occupied in September. The building will contain eight classrooms, a kindergarten, and manual-training and domestic-science rooms, and will cost



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\$175,000. It was erected from plans prepared by W. B. Ittner, of St. Louis.

—Little Falls, Minn. Repairs have been begun on one of the grade schools to improve the lighting facilities. The work was hastened by reports to the effect that weak eyes were on the increase in this particular school.

—Paoli, Ind. The contract has been let for the construction of a new high school to cost \$120,000. The building is being erected from plans prepared by the H. E. Boyle Company of Evansville, Ind.

—Ridgewood, New Jersey, suffered the loss of its second schoolhouse within a year on June 6, when the Monroe School was burned. This building will be replaced by a combined elementary-and-junior-high-school building, to cost about \$500,000. The building will be erected from plans prepared by Fanning & Shaw, Architects, of Paterson, N. J.

—Mt. Vernon, N. Y. The citizens have approved a school-building program of \$884,000. The program includes a number of additions and changes to schools and the purchase of sites for new buildings.

—The Journal of Education of Boston, in its issue of June 20, tells of the erection of a sod schoolhouse in Blaine county, Nebraska, which was paid for with a bond of \$300. This is believed to be the first case in the state where a bond was issued for building a sod schoolhouse.

—New York, N. Y. The city board of estimate has given the board of education an appropriation of \$7,302,000 for school construction purposes in connection with the further expansion of the school-building program. A total of \$13,572,300 had been requested by the school authorities for school sites and construction but the board of estimate has allowed funds only for the most urgent items.

—Indianapolis, Ind. The board of education has approved in a building program a new technical high school, comprising a large auditorium and two wings for the classroom buildings, to be erected at a cost of \$450,000. An addition will also be erected for Public School 37, at a cost of \$400,000.

—Supt. H. C. Weber of Nashville, Tenn., recently outlined in detail the immediate building needs of the schools in order to take care of public education for the coming year. Supt. Weber approves the ordinance introduced in the city council, which calls for the issuance of \$800,000 in bonds to build new schools and to enlarge the existing buildings.

Supt. Weber displayed a set of maps and charts to show the location of schools and their shortcomings in taking care of the increasing school population. From these exhibits he made a clear presentation of the needs of the schools and the plans for establishing new buildings. It was brought out that the present schools are so overcrowded that in most of them basement space has been utilized during the last school term.

—Rockland, Mass. The citizens recently approved the erection of a junior-senior high school in Memorial park. The building replaces a school destroyed by fire and will be erected at a cost of about \$350,000.

—Philadelphia, Pa. The name of Woodrow Wilson has been given to the new junior high school in process of erection at Cottman and Loretta streets. Other schools which have been named after presidents are the Harding and Roosevelt Junior High Schools.

The Harmer School, an annex to the Germantown High School, will be added to the Fulton

School in September. This action became necessary because the Simon Gratz Senior High School which will open next year, will draw pupils from the Germantown School.

—Milwaukee, Wis. The new school-building program of the board of education calls for an expenditure of \$12,000,000 during the next five years, \$2,000,000 of which will be spent on new buildings during 1928. It is expected that the present program will make it possible to take most of the children out of barracks and antiquated buildings.

The new program includes the completion of the Lincoln High School at a cost of \$1,250,000; the building of an addition to the South Division High School, at a cost of \$250,000; the completion of the Twenty-seventh Avenue School, at a cost of \$685,000; an addition for the Davis Street School, at a cost of \$25,000; and the purchase of sites for two new schools.

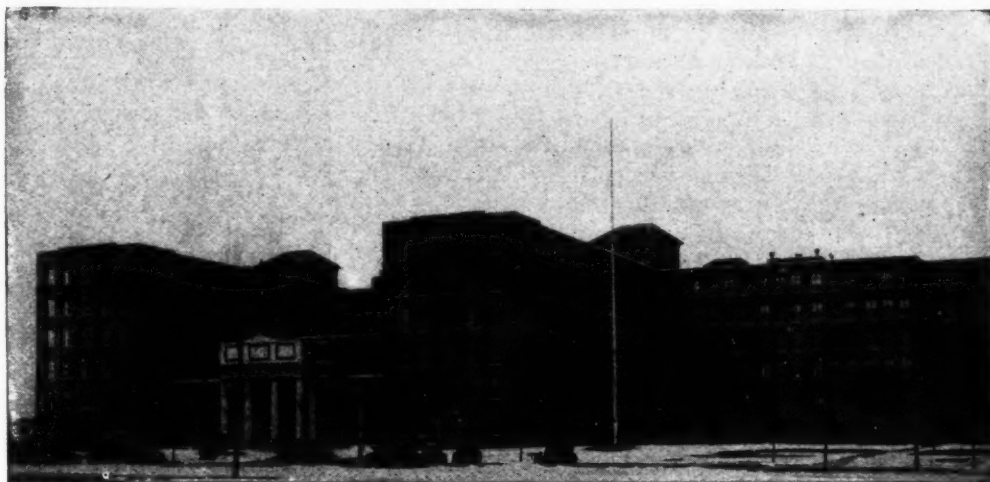
—Springfield, Mo. Steps will be taken to provide school buildings which will be safe from fire and

(Concluded on Page 96)



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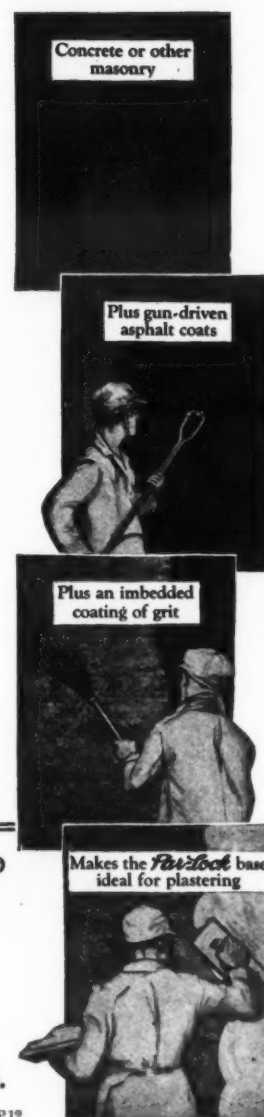
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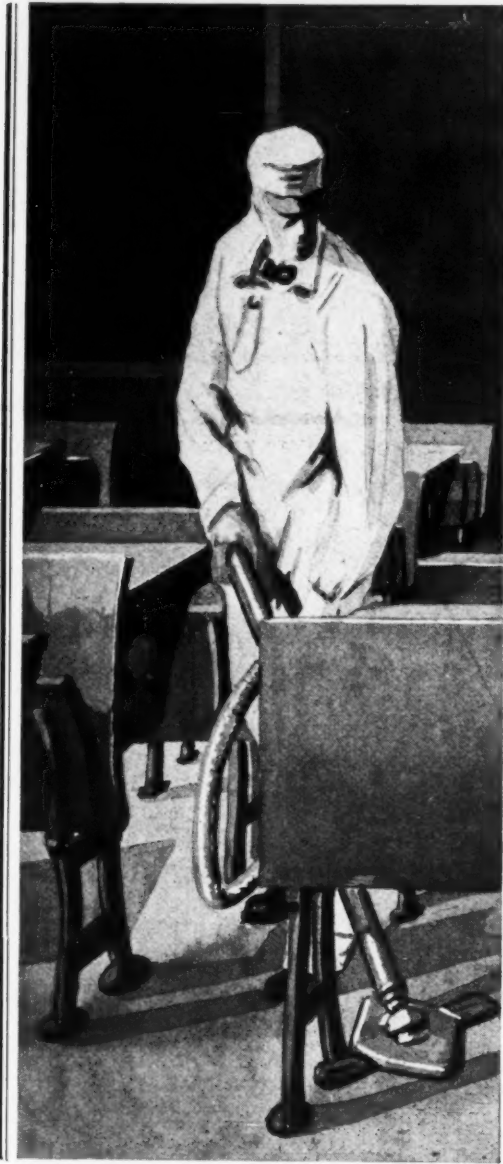
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P 12



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(Concluded from Page 94)

panic, sanitary, and adequate for modern school demands. A bond issue for building improvements will be submitted to the voters for approval at the regular fall election.

—Hamilton, Ohio. The school board will ask the voters to approve a large building program at the November election. Last year the voters rejected a \$500,000 bond issue. The new bond issue calls for \$1,000,000 for building purposes.

—Atlanta, Ga. Allocation of the second \$1,000,000 of school-bond funds has been approved by the board of education. The first \$1,000,000 was previously allocated and a third \$1,000,000 will be taken under consideration in the near future. The list of projects to be undertaken with the second \$1,000,000 of bond money is as follows: Additional property at Commercial High School, \$42,228.68; transfer of \$2,000 for new grounds at Bass Junior High School to the third \$1,000,000 budget; \$75,000 for building for the Maddox Park Junior High School; \$40,000 for remodeling Adair Elementary school; \$5,000 for Calhoun School; \$35,000 for a site for new Edgewood Avenue School; \$40,000 for Forrest Avenue School; \$33,000 for additional land and remodeling of the Georgia Avenue School; \$41,000 for Goldsmith School; \$65,000 for a site for the Haygood-State replacement; \$50,000 for Highland School; \$54,000 for land and remodeling of Kirkwood School; \$15,000 for Luckie Street School; \$500 for C. J. McLendon; \$70,000 for Moreland; \$40,000 for Oakland City; \$65,000 for playground space and remodeling of the Slaton School; \$23,000 for Tenth Street School; approximately \$90,000 for Whiteford Avenue School for white institutions.

Ashby Street School will be reconstructed and made a bond project with an allocation of \$35,000 from the bond money to be added to the \$29,000 insurance fund which will make the Ashby project cost \$54,000.

—Bath, Mich. The Bath Consolidated School District board has accepted the offer of the state to rebuild the schoolhouse destroyed May 18 by blasts of dynamite planted by a demented farmer. A fine new school had been erected which had only partly been paid off at the time. The destruction of the building left the district in a serious situation, with the loss of the school and a debt on its hands.

—Fort Worth, Tex. An extensive program of school improvement has been outlined in a tentative \$54,800 improvement budget presented to the school board by Supt. M. H. Moore and Business Manager H. C. Sanders. Sidewalks for 23 school grounds, to cost \$15,122, are included in the budget.

—The school board of Boston is finding it next to impossible to keep up with the demand for space in school buildings, according to Mr. J. C. Brodhead, assistant superintendent of schools. The Roxbury High School for Girls, the Dorchester High School for Girls, and the Boys' High School, all have become overcrowded and are in need of additional space.

Plans for new buildings for which appropriations have been made have been begun and contracts will be awarded during the present summer.

—Selinsgrove, Pa. The school board has accepted an offer of J. Howard Burns and R. Clark McFall to donate five acres of real-estate land for a new central high school. The site faces a public park and provides sufficient space for the building and campus, as well as for playgrounds and an athletic field. Under the agreement the school must be erected within three years.

—Indianapolis, Ind. The school board has adopted a summer building repair program calling for an expenditure of \$391,868. More than \$162,000 of the estimated amount will be spent for heating and ventilating improvements, and \$7,425 more will be spent for the repair of plumbing. The remainder calls for the repair of windows, floors, and redecoration of interiors and exteriors of grade buildings. A large amount will be spent for cleaning, revarnishing, and painting of interiors of most of the buildings in the program. More than \$300,000 will be spent on the grade buildings alone, about \$35,000 on the high schools, and \$17,000 on libraries.

—The superintendent of schools of McPherson county, Kansas, has warned school boards that all doors leading to exits must open outward, and that screens on windows must be so arranged that they may be easily opened from the inside in case of emergency. Each building must be inspected and approved before school sessions begin. Buildings which have not met the requirements will not be allowed to open.

—The name of Theodore D. Judah, the builder of the first railroad in California, has been given to the latest school to be erected in Sacramento. Mr. Judah was a young engineer of the fifties, who was responsible for the routing of the Central Pacific railroad over the Sierras.

—Summit, N. J. The board of education has completed a new elementary school. Plans have been accepted for a junior high school to cost \$385,000. The building will be ready for use in September, 1928.

—The auditorium of the Riverhead High School at Riverhead, New York, has been adapted for court room purposes and school and court sessions are regularly held in the same building. The removal of the court to the school building was made necessary by a fire which destroyed the local county court house.

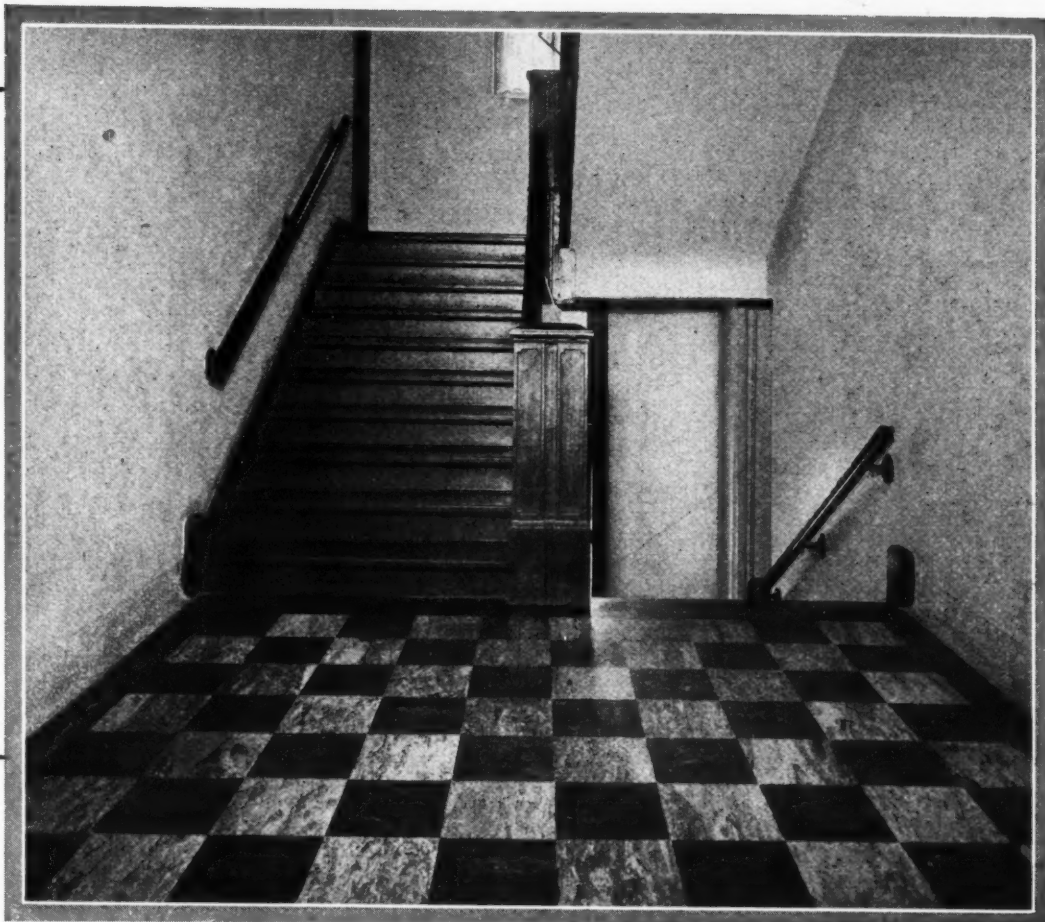
SCHOOLHOUSE DEDICATIONS

—The Newport consolidated school near Marietta, Ohio, was dedicated by a series of short talks given by County Superintendent W. H. Webb, Superintendent A. L. Way, of Matamoras, Dean Schoonover of Marietta College, Superintendent B. O. Skinner and Principal A. R. Keppel of Marietta, Superintendent J. H. Lawton, of Belpre, Superintendent F. J. Taylor of Beverly, Harold H. Snyder, of Summerfield, Lewis Heddleston, of New Matamoras, president of the county board of education, Rev. G. H. Wiggins, of New Matamoras, Superintendent G. W. Hogg, of St. Marys, and R. A. Miller of Middleport, the contractor.

—The new high school at Union, Missouri, was dedicated with appropriate ceremonies. After an introductory talk by Supt. Charles A. Cole, an address by Governor Sam A. Baker followed. President Jesse M. Owen of the board of education, also spoke. Other speeches were made by County Superintendent A. F. Borberg and Supt. D. E. Matthews of the Sullivan schools.

—The dedication of the new North High School at Wildwood, New Jersey, brought some of the notables of the state to the affair. State Supt. John H. Logan was the principal speaker. Supervising Principal W. L. Rohm delivered the address of welcome. Historic tableaux were presented by the students.

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PERSONAL NEWS OF SCHOOL OFFICIALS

MR. LISTER RETIRES FROM SCHOOLWORK

Mr. Alfred Lister, who retired as secretary of the board of education of Tacoma, Wash., at the close of the school year in June, had been an officer of the board since 1893. Mr. Lister had given 34 years of service to the schools, 22 of which he served as secretary. He came to Tacoma in 1884, and while still a young man, became interested in schoolwork. He was elected a director of the board in 1893. Since then he had been intimately connected with the progress of the schools, serving through the administrations of five superintendents. His most valuable service was in connection with the recent school construction program, which included the erection of six intermediate schools.

Mr. Lister retired at this time in order to give his entire time to private business interests. He is president of the Tacoma Savings & Loan Association in which he has been interested since its establishment in 1899.

PERSONAL NOTES OF SCHOOL OFFICIALS

—The board of education of Lincoln, Nebraska, has elected M. L. Palmer as president and Dr. E. W. Rowe as vice-president.

—President Coolidge has appointed Claude M. Remy of Redfield, S. Dak., a member of the Federal Board of Vocational Education.

—Dr. J. E. Robins has been unanimously reelected president of the school board of Charleston, West Virginia, for the next two years. Dr. Robins has served on the board during the last twelve years and has been president for eight years. Mrs. Ruth Rummel, whose term expired in June, was also reelected as a member.

—Mr. Roy Noteware, formerly superintendent of schools of Wexford county, Michigan, has been appointed assistant state superintendent of schools under Supt. Webster H. Pearse.

—R. B. Steninger has been appointed principal of the community high school at Beason, Ill.

—Leonard E. Day assumes the superintendency of the rural high school in Franklin township, Adams county, Washington.

—Clarence E. Blume, principal of the Wendell Phillips junior high school of Minneapolis, was elected principal of the Central high school at Superior, Wis.

—Dr. Henry G. Williams, formerly superintendent of the Marietta, Ohio, schools, has been elected president of the Wilmington College at Wilmington, Ohio.

—A. A. Wood has been elected superintendent of the Libby, Mont., schools.

—J. D. Lester was reelected superintendent at Kinderhook, Ill.

—Supt. Harvey H. Lourey at Fordson, Michigan, will be succeeded by Emory McLaughlin of Highland, Michigan.

—J. E. Bohn was renamed principal of the high school at Kenton, Ohio.

—R. E. Offenbauer was reelected superintendent of the schools at Lima, Ohio, for a term of five years.

—Supt. David E. Weglein of Baltimore, Maryland, and Business Manager John W. Lewis will act as representatives of the school board at each meeting of the public improvement commission, when details of the expenditure of the \$10,000,000 school loan are discussed.

—Mr. J. W. Crabtree, secretary of the National Education Association, has had his salary increased to \$10,000 per year. The increase is given in recognition of his long and distinguished service in the interests of education.

—The board of superintendents of New York City has recommended the appointment of Mr. Hazen Chatfield to the position of district superintendent of schools for a three-year period, to fill the vacancy caused by the election of Mr. W. A. Boylan as associate superintendent.

—Supt. F. R. Harris has been reelected as head of the schools of Greenfield, Ohio, for a three-year term. The reelection carries with it a salary of \$4,150 for the first year, \$4,300 the second year, and \$4,500 the third year. Mr. Harris recently completed the twenty-third year of his service in the Greenfield schools, having served successively as teacher, principal, and superintendent.

—Mr. B. R. Duckworth has been reelected as principal of the McClain High School at Greenfield, Ohio, for a term of three years. Mr. Duckworth has completed twelve years of service in the schools.

—Mr. J. E. Demorest of Elmira Heights, N. Y., has been elected superintendent of schools at East Rochester. Mr. L. H. Freeman of Moravia, will succeed Mr. Demorest at Elmira Heights.

—Supt. W. L. Houseman of Geneva, N. Y., has been reelected, with a substantial increase in salary.

—Supt. S. E. Weber of Charleston, W. Va., on June 28, was reelected superintendent of schools for the next two years, and his salary increased to \$7,500. In reelecting Supt. Weber, the board asked that the former reconsider and withdraw his resignation presented some months ago. Although Dr. Weber has not given out a statement as to his plans, it is expected that he will accept the board's contract at this time.

—Mr. Earl W. Vance has been appointed superintendent of school buildings at Peoria, Ill., to succeed Scott Perdew.

—Mr. L. C. Main of Maplewood, N. J., has been appointed business manager of the South Orange-Maplewood board of education. The position is a new one created as a result of a law passed by the last legislature.

—Miss Bertha Mandel of the Dewitt Clinton High School, and Mr. William Jansen of Public School 9, Bronx, New York City, have been appointed as assistant directors of reference, research, and statistics of the board of education. Miss Mandel is a graduate of Hunter College and was one of two women on the previous eligible list for examiner. Mr. Jansen is a graduate of the New York City College and has had wide experience in experimental education.

—William Burke, president of the board of directors of the Stubblefield-Funk School, near Bloomington, Ill., has resigned, making the third and last resignation growing out of a suit against the three members of the board, charging illegalities in holding a school election. It now devolves upon the county superintendent to call an election for electing a new board before the school session starts.

—Lynn, Mass. The school board has created four new positions as follows: R. J. Schmoyer, director of physical training and health, at a salary of \$4,500 per year; S. E. Burr, director of research

(Concluded on Page 101)



American Cities

BALTIMORE—The Washington Monument
Drawing by M. PAUL ROCHE (Series No. 7)



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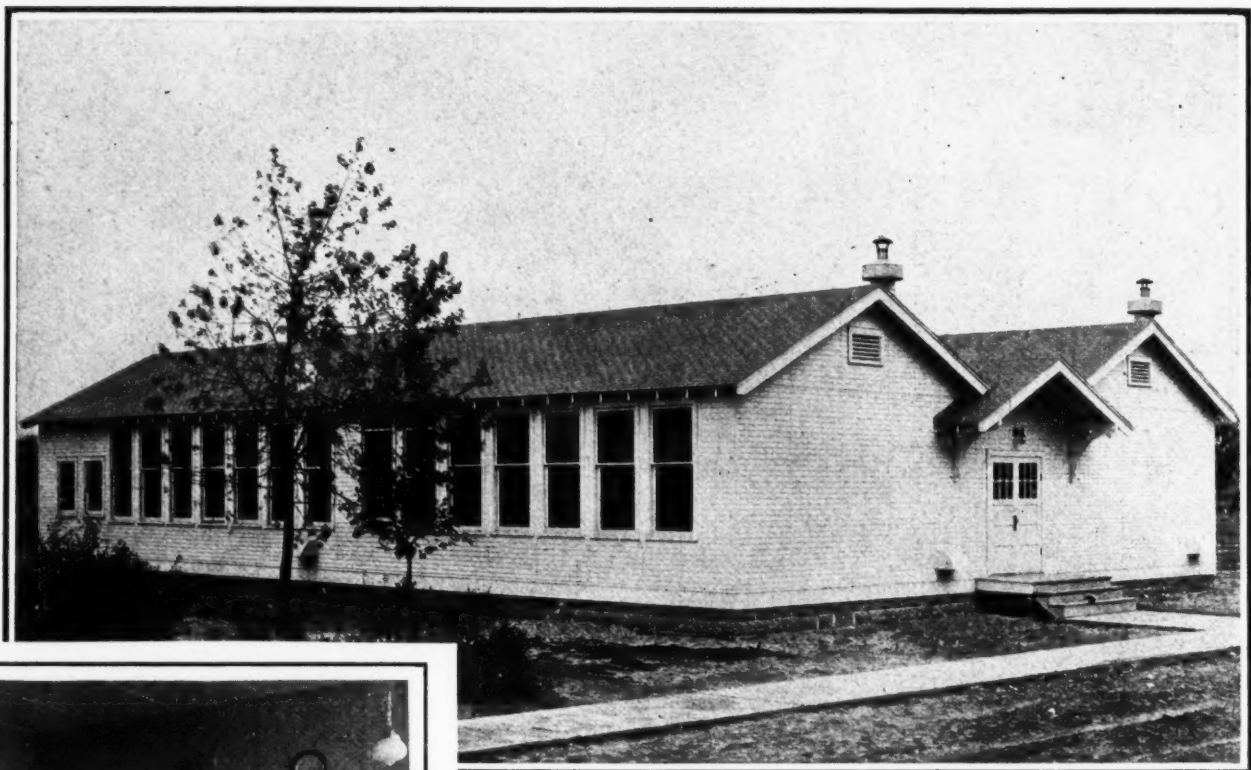
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DALLAS - CHICAGO

"The Book Cover with the Double Corners"

(Concluded from Page 98)

and guidance, at a salary of \$4,000; Miss Alice Hughes, supervisor of elementary grades, at a salary of \$3,000; R. W. Babb, assistant superintendent in charge of business affairs, at a salary of \$4,000. Additional proposed offices are a psychologist, another assistant superintendent, a director of census and attendance, an additional attendance officer, and a visiting teacher for the attendance department.

—Dr. V. D. Washburn, who recently retired as president of the board of education of Wilmington, Delaware, was given a farewell reception by members of the board, principals, teachers, and employees of the school system. Dr. Washburn was presented with a solid silver dinner service, and Mrs. Washburn was given a basket of roses.

—Judge J. A. Page has been appointed supervisor of buildings and grounds for the board of education at Roanoke, Va. Mr. J. S. McDonald succeeds Judge Page as clerk of the board.

—Mr. H. M. Devoe, deputy superintendent of school buildings in Manhattan, New York City, has been retired by the board of education after 41 years of service. Mr. Devoe will receive an annual pension of \$3,842.

—Mr. W. P. Snyder, Jr., has been appointed a member of the school board at Pittsburgh, to succeed H. D. Williams. Mr. Snyder is a trustee of the Pittsburgh University and a member of the finance committee of the citizens' committee on city planning.

—Mr. Alfred Lister has resigned as secretary of the school board at Tacoma, Wash., after a service of 22 years. Upon his retirement at the close of the school year, Mr. Lister had completed 34 years of service with the school system.

—Dr. Henri P. Linsz has been reelected a member of the board of education at Wheeling, W. Va. The appointment is for a six-year term. Mr. Fred Dunning is the new member on the board.

—Mr. W. Frank Johnston has been elected president of the school board at Anniston, Ala.

—Mr. R. S. Scobell, secretary of the school board at Erie, Pa., has been elected president of the National Association of School Business Officials for the coming year. Mr. C. H. Frey of Bethlehem, was elected vice-president.

—Mr. Robert Whitsett, Jr., has been elected a member of the school board at Logansport, Ind. Mr. Whitsett is a graduate of the Logansport High School and is the youngest member on the board.

—Mr. John W. Lewis, formerly acting business director of the schools at Baltimore, Md., has been appointed permanently to the position at a salary of \$5,000 per annum. Mr. Lewis is succeeded in his former position of director of night schools, Americanization, and attendance, by Mr. M. M. Hihn.

—Granville, N. Y. The board of education has employed Mr. A. F. Gilbert as architect for the new junior-senior high school. The building will have accommodations for 600 students.

—Supt. F. M. Shelton of Springfield, Ohio, has been reelected for another four-year term.

—Mr. A. F. Darby, attorney, and former schoolman, has been elected superintendent of schools at Corning, Ohio.

—Mr. Lewis W. Powell has been reelected president of the board of education of Racine, Wis., for a seventh term. Mr. Powell has been a member of the board since 1920.

—Mr. George J. Ryan has been reelected to serve his sixth consecutive term as president of the board of education of New York City. Mr. Samuel Stern was reelected to serve his fifth consecutive term as vice-president.

—Mr. W. W. Griffith celebrated his 25th year as head of the Ferguson, Mo., schools with a dinner at a hotel. The guests were ten other superintendents of St. Louis county school districts and R. G. Russell, county superintendent. Since Supt. Griffith took charge the schools have grown from one building with courses up to the tenth grade, to two grammar schools and a high school.

—Mr. George C. Adwers has been appointed chief engineer for the school buildings of Omaha, Nebr. Mr. Adwers will be under the supervision of the business manager and will receive a salary of \$3,000 per annum.

—Supt. H. Ambrose Perrin of Joliet, Ill., has been reelected for another year, at an increase in salary.

—Supt. W. P. Snuggs has been reelected as head of the schools at Jasper City, Ala.

—Mr. G. W. Green of Buckley, Wash., has been elected superintendent of schools at Anacortes.

—Mr. W. C. Rohleder, formerly of Hillsboro, Ohio, has been elected superintendent of schools at Grandview Heights.

—Mr. E. C. Franklin, who for the last five years has been superintendent of schools at Carlyle, Ill., has been elected to the principalship of the township high school at Villa Grove. The appointment carries a four-year contract, with a substantial increase in salary.

—D. Walter Potts was reelected superintendent at East St. Louis, Ill.

—Charles A. McMillan of Harrisonville, Mo., was reelected superintendent at Lebanon, Mo. McMillan succeeds Roscoe V. Cramer.

—At Bloomington, Ill., S. K. McDowell was reelected superintendent.

—B. D. Hudson of Dugger, Ind., is the new superintendent at Havana, Ill.

—Elmo E. Spoerl was named high-school principal at Metuchen, N. J., at a salary of \$3,100.

—The board of education of Alliance, Ohio, refused to reelect Supt. B. F. Stanton, who has been school head for ten years.

—G. V. Bradshaw was elected superintendent of the Canton, Mo., schools.

—Every white child in the public schools of Athens, Georgia, has obtained a certificate from a dentist stating that all necessary dental work has been completed. Athens is the first city to achieve this record. The campaign, which was completed about January 1, followed a conference of the departments of health and education and the dentists. There were talks and the distribution of literature in the schools, clubs, and churches. The dentists did much of the work without charge.

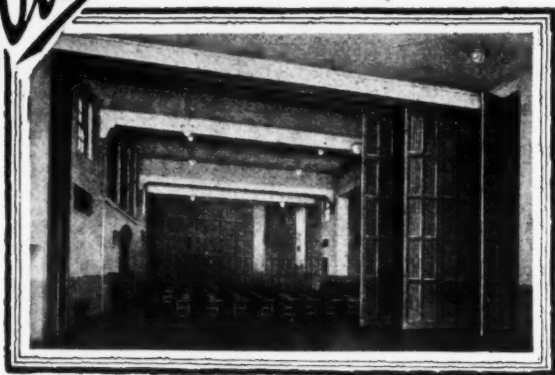
—Mr. J. W. Kern has been elected superintendent of the Madison township high school near Mansfield, Ohio.

—Mr. W. L. Ely of New Madison, Ohio, has been elected superintendent of schools at Gratis, to succeed S. S. West.

—Mr. Roy Noteware has been appointed assistant state superintendent of schools of Michigan. Mr. Noteware will be associated with Mr. Webster H. Pearce, who will be state superintendent beginning with July 1.

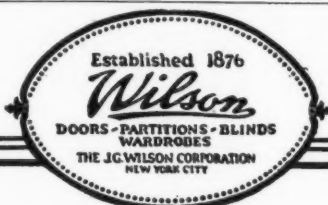



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TEACHERS AND ADMINISTRATION

A FORM FOR RATING EXPERIENCED TEACHERS

It has long been felt that it is not altogether desirable to rate teachers on an absolute scale. The procedure seems to imply a comparison of one teacher against another teacher within the department. It is not the purpose to have one teacher better than another, but it is intended that each teacher shall be better than he was last year. A teacher ought not to be rated against someone else, but against himself.

The form which follows was devised and used last January as an experiment in one of the New York City schools. The form used is followed only in the cases of experienced teachers—those conversant with the best methods in instruction and with new points of view in such matters; who are intelligent, earnest, and versed in routine procedures. Its use is based on the conception that teaching is an art, which involves spiritual attributes and the full use of the total capacities of the intellect. Below are listed personal attributes and mental habits whose cultivation seems necessary if the teacher desires to increase the degree in which he is able to meet the exacting demands of his profession.

1. *Care given to one's own physical condition.* (The finest qualities function imperfectly if the teacher does not feel well, fit.)

2. *Enthusiasm.* (Here is included a perseverance in the face of obstacles; ability to achieve optimism by an act of the intellect, if it does not come naturally; hopefulness; good humor; sense of humor; in reality, courage is also involved.)

3. *Courage.* (Not deterred from action through fear for self; involves, as do most of these items, absence of self-consciousness.)

4. *Generous in expenditure of energy.* (Does not imply that the teacher should do beyond his physical or spiritual strength; means, rather, the absence

of the bargaining spirit in performance—the absence of the “what is there in this for me?” attitude. A profession is sometimes defined as an occupation in which there is no mathematical relation between services rendered and pay received.)

5. *Appreciation of good workmanship.* (What we see in a man who builds a machine with quality beyond apparent demand or need; joy in fine performance by others in one's own field; intolerance of careless work.)

6. *Sympathy.* (Ability to imagine one's self in the other's place, and to modify judgment, or act accordingly.)

7. *Sense of responsibility.* (Sense of the consequence to others of the acts performed, or judgments made by self; avoidance of gossip, loose talk, snap judgment, vindictiveness.)

8. *Group consciousness* as opposed to self-consciousness. (Recognition of the fact that the self lives in a society, not individualistically, and that consequently judgments, statements, and acts must be different from those dictated by the natural self—if for no other reason, because the self will not otherwise gratify its own interests. True morality, especially intellectual morality, is not attained without this quality. From it spring all the habits characteristic of the scientist; careful ascertaining of morality, is not attained without this quality. From it spring all facts, avoidance of secretcies, elimination of all direct self-interests, including superiority manifestations and contention attitudes; desire to “come out on top,” thrusting one's self into the limelight, monetary rewards, resentment of criticism for sake of the thrill of self, immodesty as to knowledge or position attained. This quality is held up as desirable, not as a virtue in itself, but simply as a sensible means of getting what selfishness really wants.)

9. *Philosophic habit of mind.* (Habit of referring decisions made within the self to a set of basic principles; habit of continuously meditating, speculating on these principles with a view to their betterment; absence of undesirable emotional influences in making judgments; possession of serenity.)

TEACHERS AND ADMINISTRATION

—Timothy D. Poucher, president of the federation of teachers' associations of New York City, has asked the supreme court for an order of mandamus to compel the comptroller to countersign audits of the board of education in the adjustment of claims

of eight teachers who were injured while performing their duties. The comptroller has refused to countersign the audits of the board of education on the ground that the evidence submitted was not sufficient to show the board liable.

In all there are 32 claims, aggregating more than \$3,000, which have been passed by the board of education, and which will be affected by the test case. The board of education held itself liable for the claims and accepted the liability in transmitting to the comptroller the special estimate for the appropriation to cover the claims.

—The local historical society at White Hall, Illinois, has enlisted the aid of teachers of the state in a movement to erect a suitable memorial to the late Annie Louise Keller, a teacher in a one-room school in Green county, who lost her life in protecting her little charges from a tornado which struck the building. Miss Keller quietly commanded her pupils to crawl under their desks, and then took up her post at the door, quieting the children with her presence and encouraging words. After the storm abated, the children ran out unhurt, but the teacher's life had gone out under the crushing blow of bricks and mortar.

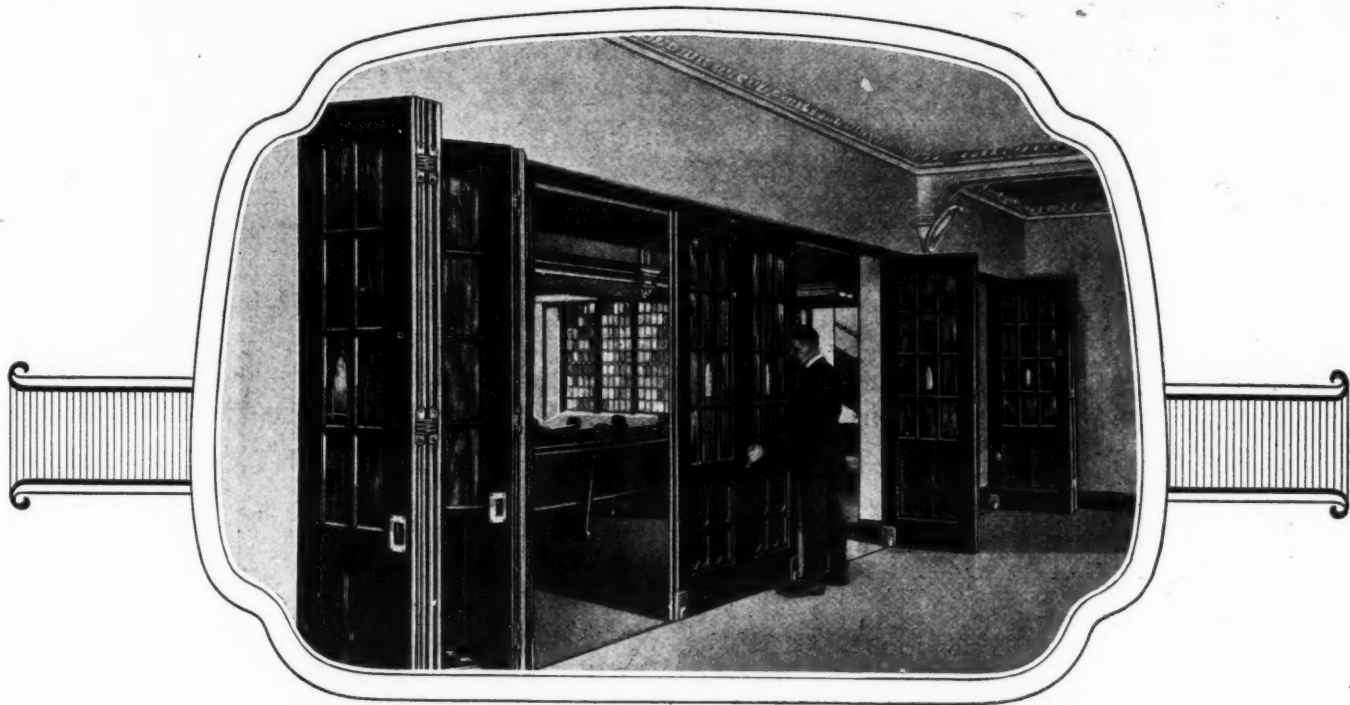
State Supt. Francis G. Blair, in a letter to the teachers of the State of Illinois, has requested the aid of the teaching profession in contributing funds to be applied in erecting the memorial.

—Of 1,634 newly appointed teachers in Alabama during the school year 1925-26, 25 per cent taught in one-teacher schools. Primary grades of larger schools absorbed 35 per cent of the new teachers; intermediate grades, 19 per cent; and junior and senior high schools, 16 per cent.

—Teachers who have not advanced their professional training within the past four years will no longer be employed in Crook county, Wyo., according to a recent decision of the school-board association.

—The petition signed by 500 teachers asking for an increase of salaries to the extent of \$100 per teacher, presented to the Akron, Ohio, school board, was denied.

—Chicago, Ill. Asst. Supt. Wm. J. Bogan has recommended that visiting teachers be used for reclaiming and saving backward and “problem” children. Mr. Bogan has asked for at least a dozen such teachers to be assigned to the various school districts throughout the city.



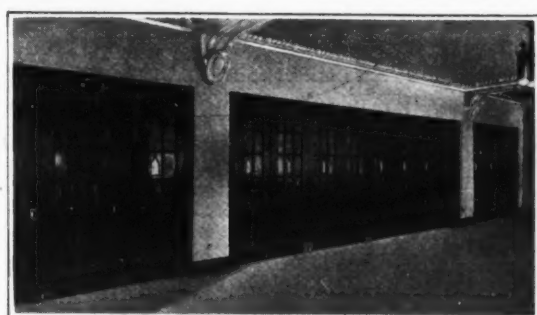
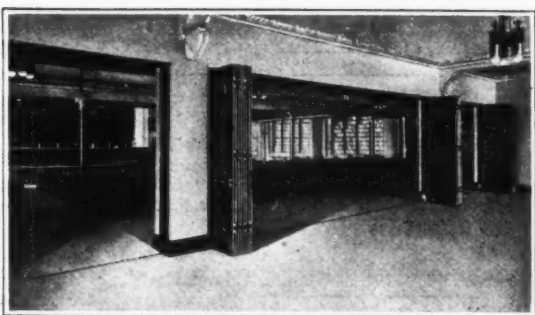
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- Cass Technical High School, Detroit, Mich.
- Technical High School, Omaha, Nebr.

TEACHERS' SALARIES

NEW SCHEDULE OF SALARIES AT PROVIDENCE, R. I.

—The school board of Providence, R. I., on June 13, adopted a resolution providing for a schedule of salaries for teachers, janitors, and other employees, to take effect in September, 1927. Under the schedule, the regular increase in salary is fixed at \$100, and amounts not to exceed \$200 in special cases; increases in addition to the regular maximum for each class of teachers not to exceed \$200 will be paid to teachers for special ability and merit. Length of service for salary increments will be determined from the date of beginning of service under appointment, not including service as a pupil or student teacher, unassigned teacher, or substitute teacher. The following is the schedule adopted:

High Schools—Principals, minimum, \$4,200, and maximum, \$5,000; vice-principals, minimum, \$3,300, and maximum, \$3,500; teachers, minimum, \$1,400, and maximum, \$3,000; shopwork supervisor, maximum, \$3,500; heads of departments, minimum, \$100, and maximum, \$200.

Trade Schools—Principal, minimum, \$3,700, and maximum, \$4,000; teachers, minimum, \$1,400, and maximum, \$2,700; heads of departments, in addition to salaries, maximum, \$100.

Grammar and Elementary Schools—Supervisors, minimum, \$2,200, and maximum, \$3,200; principals of elementary schools who act as state or city critics, for schools of six rooms or less, minimum, \$1,950, and maximum, \$2,050; for schools of more than six and less than thirteen rooms, minimum, \$2,000, and maximum, \$2,100; for schools of thirteen rooms or more, minimum, \$2,050, and maximum, \$2,150; principals whose salaries are not designated, will receive in addition to the salaries paid as teachers, for schools of six rooms or less, a maximum of \$200; and for schools of more than six and less than thirteen rooms, a maximum of \$250; and for schools of thirteen or more rooms, a maximum of \$300.

Manual-arts—Director, minimum, \$3,700, and maximum, \$4,000; supervisors of drawing and home economics, minimum, \$2,300, and maximum, \$2,700; teachers of manual training, minimum, \$1,400, and maximum, \$2,300; teachers of cooking and sewing, minimum, \$1,200, and maximum, \$1,850; teachers of drawing, minimum, for itinerant teachers, \$1,400, and maximum, \$2,100, and for grammar and elementary schools, minimum, \$1,200, and maximum, \$1,850.

Attendance—Director and truant officer, minimum, \$3,700, and maximum, \$4,000; supervisor, minimum, \$2,200, and maximum, \$2,500; attendance officers, minimum, \$1,600, and maximum, \$2,000; home visitors, minimum, \$1,400, and maximum, \$1,800.

Janitors—Custodian of property, maximum authorized salary, \$3,000 per year; inspector, maximum, \$40 per week; engineers, \$38 to \$42 per week; assistant engineers, \$31 per week; day firemen, \$29 per week; janitors, \$26 to \$38 per week; in buildings of less than ten rooms, \$19 per week; in buildings of ten rooms and over, \$20 per week; in addition, it is ordered that for each room in use as a classroom in buildings in which full-time assistants are not employed, janitors will be paid \$0.75 a week, and in buildings in which such assistants are employed, janitors will be paid \$0.50 a week; night janitors or firemen will be paid \$27 per week for a week of seven nights, and assistant janitors, helpers, and laborers, \$23.50 per week; women cleaners will be paid not exceeding forty cents an hour.

CLAYTON SALARY SCHEDULE

—Clayton, Mo. The board of education has recently approved the addition of another step in the single-salary schedule, under which teachers have been appointed for the fourth year. Teachers in the fourth year of service will receive a maximum of \$1,400 in class one, \$1,620 in class two, \$1,860 in class three, and \$2,100 in class four.

The schedule as revised, provides for maximum payments of \$1,775 in class one, \$2,020 in class two, \$2,310 in class three, and \$2,600 in class four. Class one includes teachers with two years of training beyond the high school; class two, teachers with three years of training beyond the high school; class three, teachers with four years of training and a bachelor's degree; and class four, teachers with five years of training and a master's degree.

The minimum salary payments in these classes are \$1,100 in class one, \$1,300 in class two, \$1,500 in class three, and \$1,700 in class four. The annual increments vary from \$75 to \$100, with \$50 paid for summer-school attendance. The ninth step in the schedule goes into effect in September, 1928.

It is estimated that fifty per cent of the teachers in the elementary schools have at least four years of training and more than fifty per cent of the teachers are in summer school this year.

—Somerville, Mass. Beginning with January 1, 1926, all teachers in the schools were given increases of \$100. All elementary, junior-, and senior-high-school teachers, who were at the maximum of their classes on January 1, received a second \$100 increase in September. By this action, the maximum pay of elementary teachers is now \$1,700; of junior high-school teachers, \$1,800; and junior high-school teachers who are college graduates, \$1,900.

In the senior high school, the salary schedule is divided into classes. The maximum of the lowest class is \$1,800, of the highest is \$3,100; promotion from one class to the next higher is by action of the school board.

Under the professional improvement plan, opportunity is given teachers to secure an increase above their regular salary amounting in all to \$300. There are, therefore, the following obtainable maxima: elementary teachers, \$2,000; junior-high-school teachers, \$2,100; junior-high-school teachers having college degrees, \$2,200; senior-high-school teachers, maximum for class one, \$2,100, and for class eight, \$3,400.

NEW SCHEDULE AT WORCESTER, MASS.

—Worcester, Mass. The school board has adopted a new salary schedule for junior-high-school teachers, special teachers, and principals.

Under the schedule, teachers in the junior high schools, who possess degrees, will begin at a minimum of \$1,500, and will be paid annual increases of \$125, until a maximum of \$2,550 is reached; teachers without degrees will begin at \$1,400, and will be paid annual increases of \$125, until a maximum of \$2,350 is reached; teachers of manual training will be paid a minimum of \$1,900, and will be given increases of \$125, until a maximum of \$2,600 is reached; head clerks will be given a

(Continued on Page 106)

Called FOOL PROOF

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Lyon Steel Lockers are "foolproof" because of exclusive features of design which are made strong enough to insure permanency under hard usage.

The door of one Lyon Steel Locker will not swing back against and mar the locker next in line. This is because the full-looped hinges act as door stops. These hinges are so strong that a man can throw his whole weight against the door without springing the hinges. Nor will he spring the door, which, by its reinforcing, is the most rigid locker door made.

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The locking device of a foolproof locker should be automatic, quiet and durable. When a Lyon Steel Locker door is opened, the locking bar stays up, until the door is closed, when it drops, automatically, into place with little sound. Tests have showed that the Lyon locking device works dependably after an equivalent of 165 years of average use.

There is surprising durability, also, in the handsome olive green finish—a lasting enamel—that will stand the severe "hammer test."

So foolproof do Lyon Steel Lockers prove to be that one installation in a city is followed by others as new school buildings are erected or old ones re-equipped.

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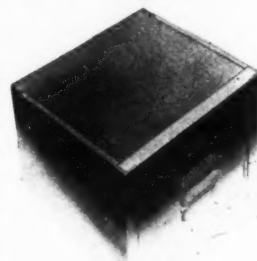
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STEEL lockers to be dependable and built to give permanent satisfaction must embody the three first essentials of strength, endurance and appearance. These essentials are combined in A-S-E lockers. Their strength is in the high grade steel, and in the reinforced construction of all parts. The double thickness of steel at all corners—the heavy 16 gauge door—the single piece latch bar—the perfect hinge give A-S-E locker endurance. Appearance is added by the smooth clean cut frames—neat louvres—attractively designed handles and the baked enamel finish which will never peel chip nor fade.

Let our engineering department help you with your installation problems. This service is free to you. For additional information write for catalog C-25.

Tops and Sides

All sides are flanged up over the top, reinforcing the locker. Vertical edges are offset to give the greatest possible strength. All tops are individually manufactured—one to each locker—and are flanged on all four sides. Thus the top cannot come loose from the locker.



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maximum of \$1,000, and will be paid annual increases of \$75, until a maximum of \$1,500 is reached; clerks will be given a minimum of \$900, and will be paid annual increases of \$75, until a maximum of \$1,400 is reached; assistant principals will be given a minimum of \$3,200, and will be paid annual increases of \$125, until a maximum of \$3,450 is reached; principals will be paid annual increases of \$150 until a maximum of \$4,300 is reached.

The maximum salary of principals of buildings of two, three, and four units will be increased from \$2,150 to \$2,350 per annum; the maximum salary of principals of buildings of five and six units will be increased from \$2,200 to \$2,400 per annum; and the maximum salary of principals of buildings of seven and eight units from \$2,275 to \$2,375, will be raised to \$2,475 per annum.

The maximum salary of women teachers in the continuation schools will be increased from \$2,100 to \$2,350 per annum.

The maximum salary of teachers in the kindergarten and grades one to eight inclusive, and the preparatory schools, including special teachers in home economics, and women teachers in manual training, will be increased from \$1,800 to \$2,000 per annum.

The maximum salary of teachers of special classes for retarded children will be raised from \$2,000 to \$2,200 per annum.

The maximum salary of special teachers of drawing will be increased from \$1,900 to \$2,100 per annum.

The maximum salary of attendance officers and clinical examiner will be increased from \$2,100 to \$2,300 per annum.

The minimum salary of janitors giving full-time service will be increased from \$20 to \$25 per week; janitors receiving from \$25 to \$35 per week will be increased ten per cent; the salary of the head janitor will be increased from \$2,225 to \$2,500 per annum, effective September 1.

THE DALLAS SALARY SCHEDULE

The Dallas, Texas, board of education has made increases in its teachers' salary schedule. In doing so, it wishes the public to understand that a relatively larger compensation of the teacher will emphasize the value of the work done in the classroom, which is such an essential part of the school's service to the child. The board further urges that the teachers feel the need of a salary that will

enable them to maintain a standard of living in keeping with the increasing demands of their profession, and that will give them freedom of mind and spirit necessary for the highest contribution of the teacher to the child. The increases granted are as follows:

EXHIBIT A.—Increases in salary for this year are:

1 superintendent of schools.....	\$1,500
1 assistant superintendent of schools.....	600
3 district superintendents, each.....	500
1 health supervisor (first year of service).....	500
4 supervisors of special subjects, each.....	300
1 supervisor (part time).....	150
1 health assistant supervisor (first year service).....	250
3 departmental assistants, each.....	250
17 elementary principals, 15 per cent of salary of 1925-26, each.....	450
14 elementary principals, 15 per cent of salary of 1925-26, each ranging from \$300 to.....	435
5 high-school principals, each.....	200
(and an annual increment of \$200 for four years until a maximum of \$5,000 is reached.)	
167 high-school classroom teachers, each.....	75
94 high-school teachers, according to present reports, receive no raise on account of not having been in the system more than two years or inability to meet requirements.	
447 elementary classroom teachers, according to present reports, receive.....	72
242 elementary classroom teachers receive no raise on account of not having been in the system for more than two years.	

Exhibit B.—Schedule adopted for year 1927 and after:

Annual automatic increment for high-school teachers to be \$81 per year instead of \$75 per year as per schedule adopted in 1919.

Maximum salary for high-school teachers to be \$2,700 instead of \$2,400.

Annual automatic increment for elementary teachers to be \$72 per year instead of \$70 as per schedule of 1919.

Maximum salary for elementary-school teachers to be \$2,000 instead of \$1,700.

No high-school or elementary-classroom teacher is now being paid the new maximum. By an automatic annual increase of \$81 or \$72 per year those teachers now receiving the maximum of \$1,700 or \$2,400 will reach their new maximum in a period of about three years.

A period of from four to twelve or fifteen years will be required for teachers below the maximum to reach the maximum by automatic increases according to the schedule.

Administrative Salaries

The following is the present schedule of salaries for the principal administrative officers:

Superintendent	\$10,000
Assistant superintendent	6,000
High-school supervisor	5,500
Grade-school supervisors	4,750
Supervisors of special subjects.....	3,450
High-school principals	4,200
Elementary-school principals	3,450

SALARIES FOR HIGH-SCHOOL LIBRARIANS

A table showing the salaries paid by junior- and senior-high-school libraries throughout the United States has been compiled by the American Library Association.

City	No.	Librarians		School Enrollment	
		Min.	Max.	Min.	Max.
Atlanta	6	960	1200	700	1800
Baltimore	7	1000	1440	1750	2701
Berkeley	1	2120	.....	2425	.....
Birmingham	3	1500	1625	1572	3000
Boston	3	1824	2016	1458	3061
Bridgeport	3	1900	2390	676	1597
Chicago	7	1800	2100	2709	3986
Cincinnati	7	1400	2800	759	2815
Cleveland	23	1500	2700	450	3396
Denver	19	1350	3000	588	1839
Detroit	28	1700	2500	1173	4140
Duluth	3	1775	2550	982	1801
Elie	3	1000	1400	745	1975
Evansville	3	1400	1500	622	1802
Flint	4	1450	2280	1600	2300
Fort Worth.....	4	810	1350	900	2000
Gary	1	1500	.....	2733	.....
Glendale	2	2000	2275	980	2163
Grand Rapids....	7	1500	2500	365	2059
Houston	3	1800	2100	951	1488
Indianapolis	1	2100	.....	2100	.....
Jersey City.....	3	1980	2100	2013	3821
Kansas City, Mo.	2	2000	2300	1579	1609
Long Beach.....	8	2300	2600	430	2829
Los Angeles.....	52	1800	2500	689	3094
Louisville	8	800	1500	786	1461
Minneapolis	9	1650	2500	647	2400
New Bedford....	3	1425	2600	962	1774
New Haven.....	.....	1500	1600	.....	5441
New York.....	74	1500	2700	433	6608
Newark	5	1700	3840	983	2493
Oakland	11	1740	2820	645	2412
Paterson	1	2700	.....	2027	.....
Philadelphia	13	2050	3025	1812	3616
Pittsburgh	14	1975	3200	734	2797
Rochester, N. Y.	9	1450	2550	221	2315
St. Joseph.....	1	1500	.....	1469	.....
San Diego.....	10	1836	2700	359	2968
San Jose.....	3	2214	2502	940	1627
Sloux City.....	1	1620	.....	.....	.....
Somerville	1	1500	.....	2316	.....
Spokane	2	2150	2350	2220	2318
Trenton	3	1700	3400	.....	.....
Washington	10	1400	2200	1091	2935
Youngstown	6	1450	2400	990	1785

In all cities, with the exception of Cleveland, Grand Rapids, Indianapolis, and Jersey City, the salaries are paid by the board of education. In the four cities named the salaries are paid by the public library. The aggregate salaries paid in leading cities are as follows: New York, \$162,500; Cleveland, \$86,713; Pittsburgh, \$51,275; Oakland, \$41,880; Long Beach, \$30,837; Denver, \$28,350; Minneapolis, \$23,775; Philadelphia, \$37,000; Rochester, N. Y., \$22,800; San Diego, \$23,500; Newark, \$14,490; Jersey City, \$10,020, etc., etc.

I am a footstep—a wasted footstep. Left here by the principal in a bad frame of mind. But I don't blame him for feeling as he does the way he must go from classroom to classroom. He says, and he's quite right, that Inter-Phones would save him—and a lot of other folks in the school—all this useless trotting 'round. He says that if there were an Inter-Phone system here he could spend more time at his desk doing more of the really important things that count in a principal's life. The other day, I overheard a man talking about Inter-Phones. Said he was a specialist from Graybar Electric, and that he could show how to put Inter-Phones in, and how they'd save time and foot-steps like me. Hope he talks to the school board.

P.S. Let a wasted footstep strongly recommend Graybar Inter-Phones because they are the surest, the most dependable and the cheapest-in-the-end means of doing away with wasted foot-steps. Inter-Phones carry a name that stands for quality in electrical equipment and we foot-steps respect the value of that name.

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THE WORK OF THE ATTENDANCE DEPARTMENT

—Mr. D. C. Armstrong, of the attendance department at Detroit, Mich., in the June issue of the *Detroit Educational Bulletin*, discusses the organization, administration, and end-results of the attendance department in Detroit. He shows that the duties of the attendance officer are many and varied; that the work is exacting, fatiguing, and oftentimes dangerous. The work is nevertheless broadening as the officer must meet daily and intimately the varied problems of people of all stations, creeds, and colors, and thus gains a better understanding of the needs, and a greater sympathy with the peculiarities and faults of his fellowmen. Mr. Armstrong writes as follows:

"The board of education of Detroit, Michigan, employs a staff of 56 men and women to enforce the compulsory education law and to bring about adjustments between the school and the home.

"Detroit's attendance officer is not a truant officer; he is not even the visiting teacher which some cities maintain; he must do all the work of those two, and in addition, he must be a definite and distinct social agent in the community that he serves.

"Each attendance officer is under bond and is vested with the powers of a deputy sheriff, as the law provides; a number of these officers have had experience in teaching and are academically qualified for any position in the school system. Undoubtedly, the standard maintained by the department secures to the system a higher type of attendance officer than would otherwise be possible.

"Almost without exception, a case is treated first by the officer as being amenable to adjustment without the law. Legal pressure is the last resort of the officer who knows his business and has true appreciation of his work.

"Under the system worked out by the attendance department of Detroit, there are five reasons for nonattendance. First, the pupil may have left school legally. This includes transfer to another school within the city, having left the city, having left school because he was under or over the compulsory-education age, being physically unable to attend school for an extended period, being excluded because of mental unfitness by a court or by the special education department, or through inability to attend because of marriage or death. Second, he may be ill. Even though illness is certified to by a physician, the child is not marked "left" unless excused by the doctor for the balance of the semester. Third, he may be absent because of poverty. Fourth, he may be kept from school by his parents or guardian. Fifth, he may be a truant from school. Some of these reasons for absence may appear rather prosaic and uninteresting to most people, but each one of them provides plenty of

interest and action to tax the resources of the attendance officer.

"The truant offers the hardest and most vital problem to the attendance department. Though there is no set formula for the solution of any type of problem, most of those of any one type have several elements in common. There are as many different kinds of truant problems as there are truants. One boy may be a truant because of conditions at home. Another child may be a truant due to the influence of unfit companions. Another child may be truant simply because he lacks purpose. School may not be particularly distasteful to him, but he lacks the ability to become interested. Sometimes commitment to a special room will aid him. Sometimes unofficial probation to the attendance officer will correct the difficulty, but most often, an appeal to his sense of loyalty—loyalty to his parents, to his school, to his principal, and to his attendance officer, will accomplish the desired result. The problem of the foreigner is especially difficult as one of the officer's hardest tasks is to dispel suspicion and distrust and to instill in its place a sense of trust and confidence. The only basis upon which the officer can produce permanent results is that of honesty, fair-dealing, and understanding.

"The activities of the attendance officer are many and varied. He deals with countless problems arising out of the nonattendance of children at school. He talks before groups of pupils and teachers on the subject of school attendance. He is responsible for the establishment and development of the state child-accounting system in the private and parochial schools, and he cares for many details of it in the public schools. He supervises the taking of the annual census, and later checks up the results, comparing them with the results of previous years. He is responsible for the checking of child-labor violations in his district.

"The successful attendance officer is an asset to the community, for he compels the people, by persuasion or force, to take advantage of the school facilities provided and thus helps to raise the educational standard. He is an asset to the school, for he helps to make possible the carrying out of a program uninterrupted because of faulty attendance. Next to the child, he is the most important connecting link between the home and the school in a public-relations program. Above all, the work is broadening, for one cannot meet daily and intimately the varied problems of people of all stations, creeds, and colors, without developing an understanding of the ideals, needs, and a greater sympathy with the peculiarities and faults of his fellows."

School-Board Conventions

—The school boards of Oneida county, Wisconsin, met at Minocqua. Some 90 delegates were present. George Landgraf, of the state department, directed the meeting.

—A directors' meeting of the Minnesota School Board Association, was held at Bemidji. They were the guests at an evening dinner of the local chamber of commerce. Ten members of the board were present at the meeting, electing R. F. Lamb of Slayton, chairman of the legislative committee, Alfred H. Miller of New Ulm, chairman of the resolutions committee, George E. Sussens of Alexandria, chairman of the M. E. A. relationship committee, L. H. Colson of Wadena, chairman of the teachers' committee, Mrs. J. M. Hardy of Mahanomen, chairman of the music and entertainment committee, Rev. Theo. Rodsater of Hills, chairman of the necrology committee, and Chris Heen of Osakis, chairman of the university committee.

—Active lobbying by boards of education affiliated with the State Federation of Boards of Education of New Jersey, was indorsed at the semi-annual meeting of that body held at Trenton. The resolution favoring lobbying was prompted by the action of the 1927 legislature in overriding Governor Moore's veto of a bill by Senator Larson of Perth Amboy allowing municipal heads to appoint education board members and doing away with school elections in municipalities of less than 10,000 population.

—About 250 school-board members of Lake county, Wis., attended a convention held at Berlin. George Dick, state inspector of rural schools, was in charge.

Guarding School Property

—Superintendent William J. O'Shea of the New York City schools has addressed an open letter to the pupils in which he asks their cooperation in the protection of school property, as follows:

"Do not damage this school property.

"Protect it as you would a personal possession.

"Money spent for repairs because of needless or willful destruction comes out of tax funds which are paid directly or indirectly by your parents.

"A rise in taxes means higher rent and therefore an increase in the cost of living."

According to Dr. O'Shea, this notice materially reduced the expense of glass breakage in the schools last summer. He has requested the district superintendents and principals to impress upon the children the great need for the preservation and non-mutilation of the bulletins. "The cost of vandalism and willful destruction in the schools has reached a high figure and it is my duty to reduce this unnecessary expense to a minimum."

—Mr. C. F. Carusi has been reelected as president of the board of education at Washington, D. C. Mrs. Lillian Herron was reelected as vice-president.

—Dr. John Palmer, Jr., for thirty years a member of the school board of Wilmington, Del., has been elected president of that body. Mr. James T. Chandler was elected vice-president, and Miss Mildred J. Van Dyke, secretary.

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Of course, it is better to order now -- you will be certain of delivery in plenty of time for installations before the next school term. But, should you be delayed in ordering, you can obtain two-day shipment on Medart Stock Lockers any time up to September 1. We have the stock -- already built up.

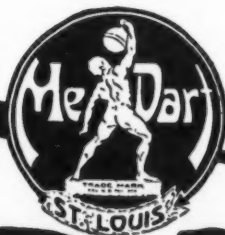
Is there any information about styles, sizes or prices that we can send you -- now?

Yours very truly,

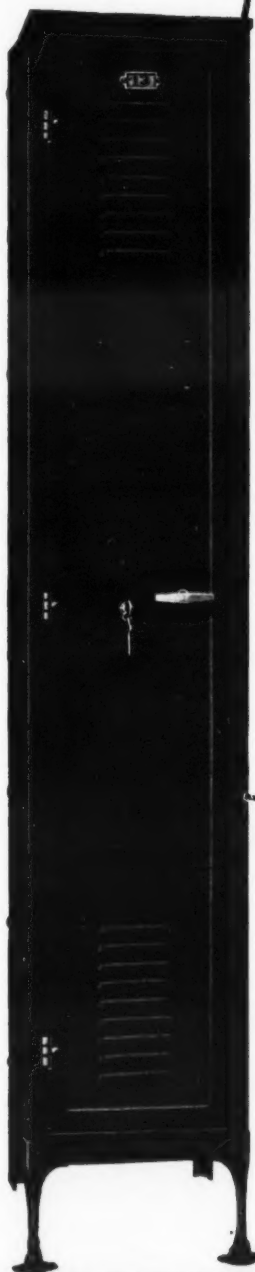
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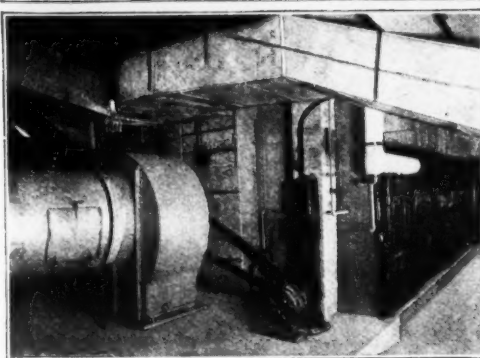
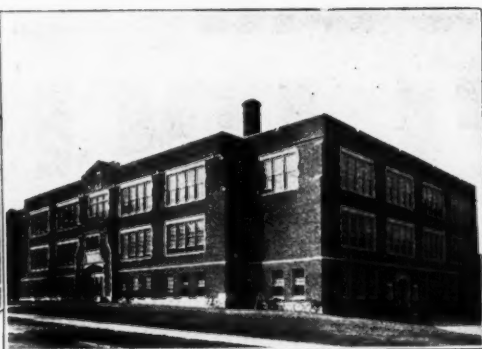


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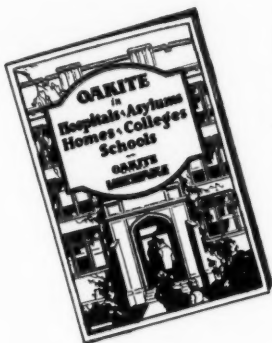
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SCHOOL FINANCE AND TAXATION

THE ILLINOIS SCHOOL-TAX STUDY

An exhaustive study of the school-tax situation of Illinois was recently made by Carl B. Althaus under the auspices of the University of Chicago and published in pamphlet form by the Illinois Agricultural Association.

The study goes exhaustively into the various school activities of the several communities and the manner of raising the taxes. The conclusion is that the present momentum and scope of the educational efforts goes beyond the tax ability of the communities to support them and that new tax sources must be discovered.

The investigator, however, does not venture a definite scheme of school support. He says: "The solution of the tax problem is the work of a group of tax experts and must be based upon more extensive data than was obtained in this study." He points as a possible solution to the states of Minnesota and Wisconsin, by saying:

"Minnesota has established a general scheme of classification of property for taxation. A law enacted in 1913 provides that property should be divided into four classes. Iron ore constitutes a group by itself and is assessed at 50 per cent of its actual value; urban real estate, which constitutes another class, is assessed at 40 per cent; rural real estate and such tangible personal property as live stock, merchandise, and machinery form another class, and are assessed at 33 1/3 per cent; household goods, wearing apparel and similar personal belongings are assessed at 25 per cent. Concerning this scheme of classification the tax commission of the state has said: 'From a theoretic standpoint it is open to very serious criticism and leaves much to be desired; but as a measure designed to accomplish a practical and much-needed reform it has proved a most pronounced success.'

"Another method of taxation which is commonly referred to as a measure of tax reform is the income tax. Under simple economic conditions property can be used as a measure of the individual's ability to pay taxes. But as society develops, classes arise which support themselves not from

their property, but from their earnings. Obviously, the individual who earns a wage or salary should not be exempt from taxation because he does not hold title to property. A property tax does not reach incomes which are derived wholly from labor. To meet this situation, several states, notably Wisconsin, have supplemented the property tax with the income tax.

"The Wisconsin income-tax law was passed in 1911. It is impossible to consider in detail the structure of this tax, but its important features are as follows: First, the law is applicable to persons living in Wisconsin, to business transacted there, and to income derived from property within the state. Second, the rates are progressive, rising in the case of individuals and partnerships from 1 per cent on the first \$1,000 of taxable income to 6 per cent on taxable incomes over \$12,000. For corporations the rate rises from 2 per cent on the first \$1,000 of taxable income to 6 per cent on income over \$6,000. The incomes of wife, husband, and children under eighteen years of age are grouped together and the following deductions are allowed: \$800 for an individual, \$1,200 for man and wife, and \$200 additional for each child entirely dependent upon the taxpayer for support. Third, the statute provides that personal-property tax may be used as an offset or credit against the income tax. Fourth, the administration of the tax is highly centralized. The assessment of corporations is made by the state tax commission and the assessments of partnerships and individuals by assessors of incomes appointed by the tax commission in accordance with civil-service requirements. The income tax is predominantly a local tax. The administration only is centralized. The state government gets only 10 per cent of the revenues collected and pays all expenses. Twenty per cent goes to the county government and 70 per cent goes to the community where the tax is collected. The fiscal results of the assessment made in 1912 may be briefly summarized as follows: (1) About two thirds of the tax was assessed to corporations, the remaining one third to firms and individuals. (2) The tax was much more productive in urban than in rural districts, the tax being borne for the most part by the more prosperous business and professional elements of the city communities. (3) Approximately two fifths of the amount assessed was offset or cancelled by payments of personal-property tax. Finally, the cost of administering the income

tax was approximately two per cent of the amount collectible.

"In view of the success of the classified property tax in Minnesota and the income tax in Wisconsin, it seems that one of the most direct approaches to the solution of the revenue problem in Illinois is a plan of classification supplemented by an income tax. The plan should recognize the diversity of the forms of property, and the rates and assessment of each class should be adjusted in such manner as to produce equitable results among the several classes of property and in accordance with the ability of each class to bear taxes. As a means of reaching the individuals who do not hold title to property but whose incomes represent real tax-paying ability the classified property tax should be supplemented with a graduated income tax."

Cost of Education in Somerville

—The annual report of the schools of Somerville, Mass., shows that the total amount spent for the maintenance of the schools for the year 1926 was \$1,009,814. This included the sums spent for the care of buildings, including janitors' services, fuel, light, and telephones; the amount for salaries of officers, and the amount spent for school supplies and for teachers' salaries. The total cost for the care of buildings was \$111,559, with a cost per capita of \$7.42; the cost of repairs amounted to \$59,902.

The total for school maintenance amounted to \$1,009,814, which added to the total for buildings and repairs, makes the total for all school purposes \$1,070,457.

An analysis of the school dollar as it is expended for the support of the schools shows the following proportions: Janitor's salaries, \$0.074; heat and light, \$0.036; administration, \$0.018; supplies, \$0.046; teachers' salaries, \$0.826.

SCHOOL EXPENDITURES IN NORTH CAROLINA

The total school expenditures, exclusive of debt service, for the schools of North Carolina for 1925-26 were \$32,500,000, as against \$1,125,000 in 1900-01, according to a recent report. In 1925-26 there was a total of 818,739 children enrolled in the elementary and secondary schools, as against 435,184 in 1900-01.

In 1925-26 the average white teacher received a salary of \$853, as against an average annual salary of \$98.77 in 1900-01. In 1925-26, the white schools

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had an average term of 149.1 days and the colored schools 138.3 days.

The report shows that in 1925-26 it took an average of \$39.63 to pay for the education of each child enrolled in school, which is \$2.33 less than it cost the preceding year. In 1900-01 it cost an average of \$2.87 to educate each child in the schools.

The same general trend is shown in per capita expenditures as was seen in total expenditures. There was a regular increase each year except 1923-24 and 1925-26. In the year preceding the first of these two years, an excessive amount of building was done by the cities to make up for the building activities which had been delayed during and after the war. In 1925-26 there was a general decrease in building activities in both rural and city schools. In the light of statistics from other states the average cost of education in North Carolina is not excessive.

School Costs in Quincy

—A recent report of the school system of Quincy, Massachusetts, shows that the expenditures for all purposes connected with the schools, excepting new buildings, alterations, and repairs, for the school year ending in June, 1926, was \$797,539. Based on the average membership of the schools for the year, this was an average expenditure of \$71.21 per pupil, which is eighteen cents less than the corresponding cost for 1925. The average per-pupil cost for the state at large was \$89.98, and for the other 38 cities of Massachusetts \$90.45. While the cost per pupil in Quincy was slightly less than that of the previous year, the average per-pupil cost for the other 38 cities increased .7 per cent, and the average per-pupil cost for the state as a whole increased 2.3 per cent.

The average per-capita expenditure for Quincy for instruction was \$52.94; for administration, \$1.62; for operation of school plant, \$5.92; for maintenance, \$3.50.

Quincy's per capita cost for instruction was noticeably lower than the average of the other cities. As Quincy paid salaries to teachers higher than the average paid in the other cities of the state, the low cost of instruction is due to other causes.

Compared with other cities and towns of the state, the statistics indicate that Quincy's ability to support education is above the average. In the amount raised for school support from local taxa-

tion per \$1,000 of valuation and in the per capita expenditure for education, Quincy is below the average. Either the school department was run with great efficiency or Quincy is not giving the same educational opportunities that are offered in other Massachusetts communities.

The facts suggest the question whether the best interests of the city do not justify a larger expenditure than the city is making for the education of the young people of the community.

IMPORTANT SCHOOL-BOND SALES OF THE PAST MONTH

Florida—Lake Co., Spec. Tax Sch. Dist. No. 21, D. H. Moore, Supt., Tavares, Fla.	\$ 300,000
Maryland—Baltimore, School, Dr. D. E. Weglein, Supt.	1,740,000
Maryland—Prince George's Co., School, Nicholas Orem, Supt., Upper Marlboro, Md.	275,000
Michigan—Springwells Tp., Unit Sch. Dist.	720,000
New Jersey—Jersey City, School, James Nugent, Supt.	697,000
New Jersey—Kearny, School, Herman Dressel, Supt., Kearny, N. J.	460,000
New Jersey—Middlesex Co., Vocational School, Series 4, M. L. Lowery, Supt., New Brunswick, N. J.	293,000
New Jersey—Plainfield, School, Frederick W. Cook, Supt.	430,000
New York—Huntington, Union Free Sch. Dist. No. 13, Robt. K. Toaz, Supt.	325,000
Ohio—Portsmouth, Sch. Dist., Frank Appel, Supt.	500,000
Ohio—Shaker Heights, Sch. Dist., R. B. Patin, Supt.	1,165,587
Tennessee—Knoxville, School, H. P. Shepherd, Supt.	850,000
Texas—Harrisburg, Ind. Sch. Dist., J. O. Webb, Supt.	400,000
Texas—Lubbock, Ind. Sch. Dist., M. H. Duncan, Supt.	286,000
Washington—King Co., Sch. Dist. No. 1, A. S. Burrows, Supt., Seattle, Wash.	750,000
West Virginia—Fairmont, Ind. Sch. Dist., O. G. Wilson, Supt.	940,000
Wisconsin—Milwaukee, Vocational School, Milton C. Potter, Supt.	825,000

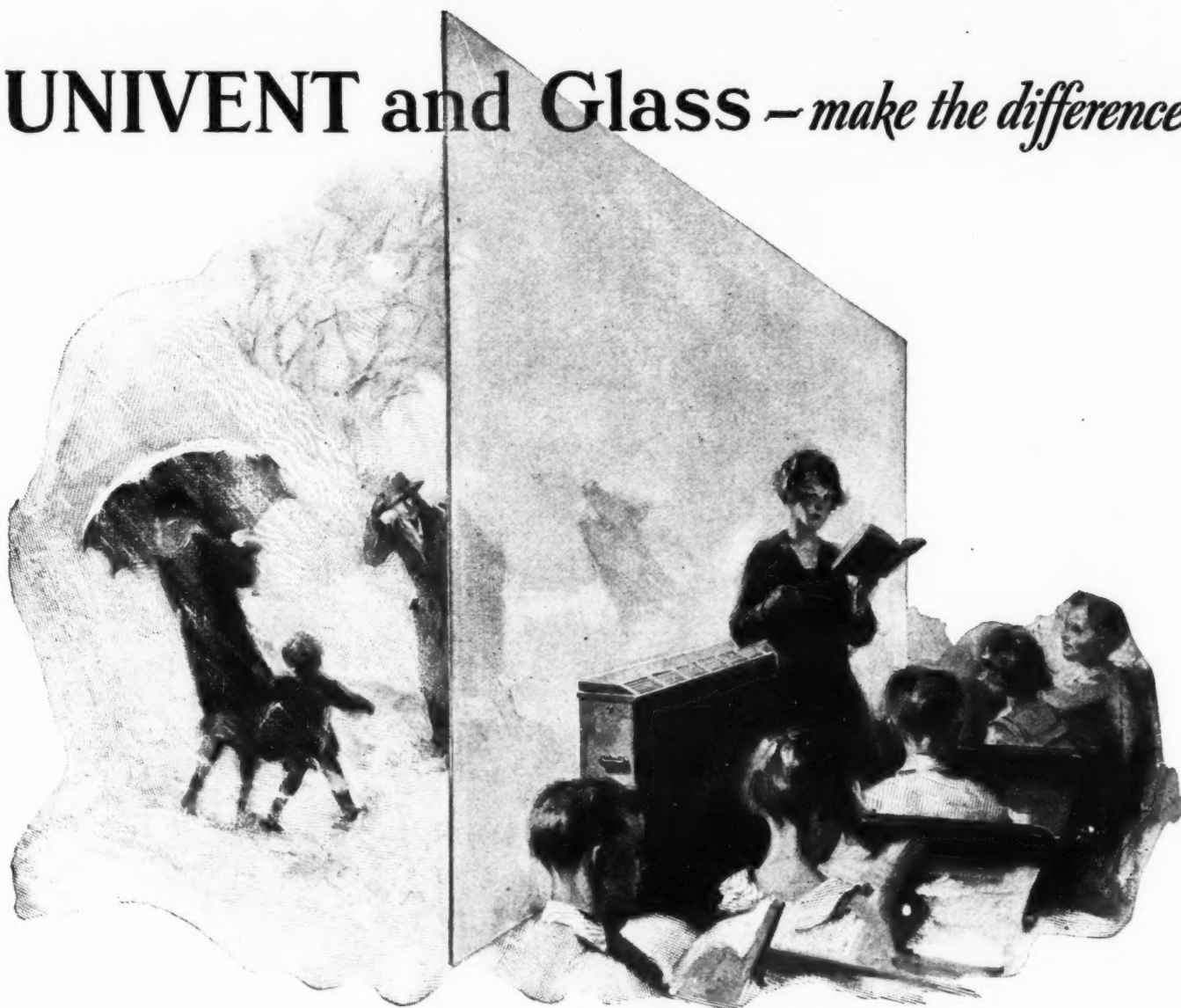
FINANCE AND TAXATION

—The Milwaukee board of education has formulated a \$12,000,000 school-building program, which is to be begun in 1928. A part of the fund is to be raised by bond issues and a part, namely, \$1,000,000 annually, by direct taxation. The program provides for several grade schools, the enlargement of grade and high schools, and the construction of one new high school.

—For several years the school budget of Stamford, Conn., has been worked out and submitted by Superintendent Joseph A. Ewart. The town board has accepted his figures without question. The amount appropriated for the support of the public schools during the current school year, 1926-27, is \$1,048,114, which represents an increase of \$147,778, or sixteen per cent over the total appropriation of the previous year. A normal increase from year to year would be approximately ten per cent. Ten per cent of the amount appropriated the current year would be \$104,811. The budget submitted calls for an increase of but \$57,396, which is an increase of only five and one half per cent.

—The fifty-fifth annual report of the school board of Somerville, Mass., for the year 1926 discusses the question of the cost of public education in the city. The report shows that the total expenditure for schools for the year was \$1,009,814, or \$45,553 more than was spent for the same purpose in 1925. The larger expenditure was caused mainly by the increase in teachers' salaries which went into effect in January, and by the sums paid to teachers under the "professional improvement" plan. The expenditure for support of public schools for the year ending June, 1926, amounted to \$65.77 per pupil based on the net average membership, which is an increase of six cents over the preceding year. In comparison with other cities of the state, Somerville has dropped to the lowest rank, having dropped from the rank of 35 of last year to 39. This does not harmonize with the wealth of the city, as the valuation per pupil in the net average membership for the year was \$7,114, giving the city a rank of 27 among the 39 cities. The per-capita cost for the support of schools in the eight cities larger than Somerville is as follows: Boston, \$105.01; Cambridge, \$91.02; Worcester, \$92.37; Springfield, \$119.96; Fall River, \$106.51; New Bedford, \$91.05; Lowell, \$95.75; Lynn, \$79.83.

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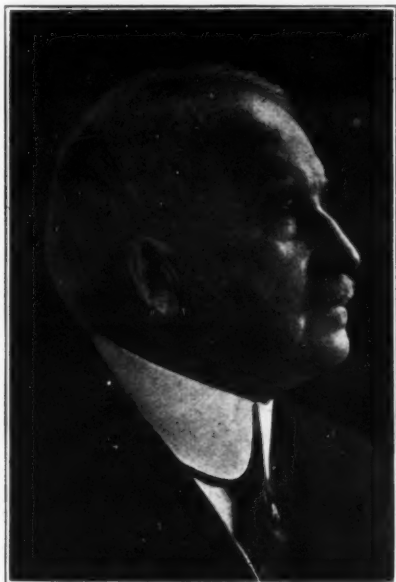
*Lincoln Junior High School, Canton, Ohio
Vernon-Redding and Associates of Mansfield,
Ohio, Architects

A GREAT EDUCATIONAL PUBLISHER RETIRES

The retirement of Dr. William E. Pulsifer from the presidency of D. C. Heath and Company emphasizes a chapter in the field of the educational publishing business in which he has been a very prominent factor, and brings to an end insofar as active participation is concerned, a career which has had few, if any, equals in that business.

He was one of the original members of D. C. Heath and Company, organized in 1886, and is the last survivor of four men, namely, Daniel C. Heath, William E. Pulsifer, Winfield S. Smyth, and Charles H. Ames, who constituted that organization. He was treasurer of the company and manager of the New York office which positions he retained until 1910, when upon the reorganization of the company he became its president. Thus, he has seen the House of Heath develop into one of the leading educational publishers of this country, with a list of books which has contributed very largely to educational progress and which has won the respect of the educational field.

With the retirement of Dr. Pulsifer there passes one of the remaining few of the galaxy of pioneers in the educational publishing field who developed



DR. WM. E. PULSIFER,
Retiring President, D. C. Heath & Co.,
New York, N. Y.

both an art and science in textbookmaking. The American schoolbook of today has no equal in the world and is a fitting compliment to the efforts of our unexcelled teachers and schools. The educational publisher must of necessity be a constant student of educational problems because he must anticipate the future needs of the schools in both the content of textbooks and the pedagogy of presentation. Then, too, there are the factors of embellishment which give both charm and assistance, as well as the typography and page arrangement to accommodate the eye, the manufacturing specifications to insure durability and minimum expense to the schools, all of which were the contributions of Dr. Pulsifer and his contemporaries.

Not only is it a credit to a man to build up a successful and useful business, but it is likewise a commendable characteristic of such men when they gather about them men of ability who with careful training are prepared to carry on the policies which have succeeded, and thus perpetuate an institution which is eminently advantageous to the nation and to the world. This Dr. Pulsifer has done splendidly as is demonstrated by the fact that offices of D. C. Heath and Company are maintained in Boston, New York, Chicago, Atlanta, San Francisco, Dallas, and London. Its texts are generously used in all of our insular possessions and in every foreign nation.

The new organization consists of the following directors and officers: Winfield S. Smyth, president; Frank F. Hummel, vice-president; Dudley R. Cowles, secretary; Dr. E. C. Hills and Dr. Franklin W. Scott. Dr. Pulsifer is honorary chairman of the board of directors and as such will continue to give freely of his valuable counsel and advice. We bespeak for the new organization the continued success which it has in the past so well deserved.

MR. WINFIELD S. SMYTH

Mr. Winfield S. Smyth, who succeeds Mr. Pulsifer as president of D. C. Heath & Company, is admirably fitted to take up the duties of that office. He was born in Cazenovia, New York, November 22, 1872. His father, Winfield S. Smyth, Sr., was Chicago manager for Ginn & Company, joined the firm of D. C. Heath & Company in 1893, and became

vice-president when the business was incorporated in 1895. Mr. Smyth, Jr., has, therefore, been bred in the best traditions of the schoolbook publishing business. As a boy and young man he worked during vacations in the shipping, accounting, and correspondence departments, and can now truthfully say that he has held every job possible in a publishing house (except that of stenographer).

After attending Leland Stanford University and pursuing postgraduate courses at the University of Chicago, Mr. Smyth took up his work with D. C. Heath & Company, first as an agent in Michigan and Ohio, and later as a special agent for modern languages. From 1905 to 1910 he was assistant manager of the Chicago office. In 1910, Mr. Smyth became a director of the corporation and treasurer and also took charge of the Boston office. In 1922, he was elected vice-president, and in June, 1927, became president.

His unusual financial ability, his keen judgment in regard to publishing matters, and his wide knowledge of educators and educational movements, are appreciated, not only by those in the company, but by all his business associates.

Mr. Smyth has an attractive home in Newtonville, Mass., and will continue to make Boston his headquarters. He is interested in the civic and literary activities of his city, and among his clubs enjoys particularly the Brae Burn Country Club, where he has a reputation as a golfer.

MR. CLIFTON SUCCEEDS MR. RIEGEL

Mr. John L. Clifton, formerly professor of Education at Ohio State University, has been appointed state superintendent of public instruction of Ohio, to succeed Vernon M. Riegel, who has resigned. Mr. Clifton was connected with Ohio University for a number of years and was at one time assistant state commissioner of education.

SCHOOL-BUILDING STANDARDS

An Important Report of the American Institute of Architects

The Committee on School-Building Standards of the American Institute of Architects submitted during the recent convention of the Institute at New York, an important report dealing with the standardization of buildings and other items of interest to boards of education. The committee in its statement, expressed the opinion that the standardization of schoolhouse plans and planning should be undertaken with extreme caution. Research should be enthusiastically encouraged and studies of building costs from the scientific point of view should be warmly commended. In the opinion of the committee, openmindedness is of more value than opinions.

The Comparison of Buildings

The committee points out in its report the difficulty of comparing the cost and capacity of school buildings. It writes:

"Any information for the guidance of future efforts cannot be regarded as useless. It is certainly of great advantage to know the cost of a building, its cost per cubic foot, and its cost per pupil. But authorities have never been able to agree upon a sufficiently accurate definition of pupil capacity to make it reliable as an architectural norm. All ratios in which cost or pupil capacity are factors are affected by shifting economic conditions, local desires and interpretations, and consequently have but a limited value."

"Even when the unit of measurement is static we should be slow to accept any set of rules or charts purporting to demonstrate the efficiency of



WINFIELD S. SMYTH,
New President, D. C. Heath & Co.,
New York, N. Y.

a building. Certain authorities have gained public attention by recommending percentages of the total floor space that in their opinion should be allotted to walls, corridors, stairs, ventilating flues, etc. But this seems to be a too simple generalization, which in its application leads to bad and wasteful design.

"The cause of architecture is but ill served when judged by the narrow standard of a quantitative analysis. At the same time it is evident that the uniformity of requirements in school-building programs affords an opportunity for the comparison of results, and an examination of many examples of similar classification discloses a very significant average relation between the volume of the building and the extent of floor space used for instruction. As it is generally true that the skillful planner is sparing of cubic contents, it follows that any considerable augmentation of the ratio between the figures representing volume and use can only be justified by parallel merits in the scheme itself. Lacking any marked advantages over the usual plan, excessive cubage means a defective scheme, or insufficient study, or both."



JOHN L. CLIFTON,
State Commissioner of Education for Ohio,
Columbus, Ohio.

"The merit of novelty cannot be claimed in behalf of this method of assaying the mechanistic value of a building, for it is known and practiced in every architectural office in the country. But for some reason this simple and easily understood rule is too often laid aside when school buildings are to be examined."

"We, therefore, urge that chief reliance should be placed in methods which have been found reliable in the past. The only stable factors in the problem are the cubic content and the square feet of instruction space. The term 'instruction space' corresponds to net usable space in any building and applies to space where instruction is given. Under one heading are classrooms, study halls, laboratories, etc. Under another heading are auditoriums, gymnasiums, etc."

"The square feet of instruction space of these classifications, taken together and separately, divided into the volume of the entire building, indicates the physical value of the scheme."

The School as a Criterion of Taste

The Committee warns against the evil of ugly school buildings which may be economical as education factories but ugly.

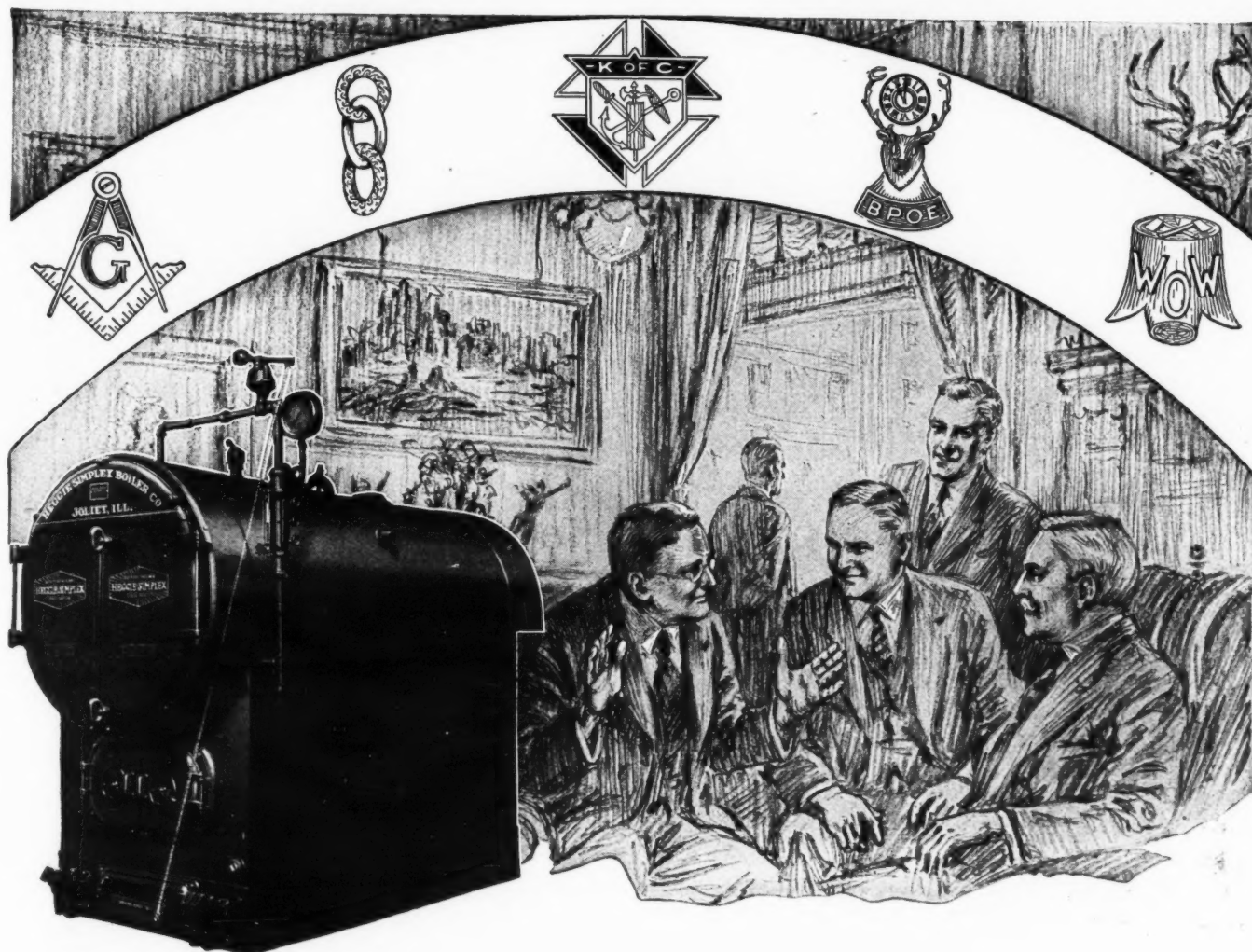
"If a school is to be a utilitarian and artistic success, there must be in its designer's mind a vivid realization of its meaning in the scheme of life. Within its walls there is an effort to impart to the student a desire for knowledge and an appreciation of the beautiful in art, literature, and morals. It is as important to our civilization as was the church to Europe of the twelfth century. Conceived in this spirit it becomes an actual, not an oratorical, temple of learning and should be the outstanding specimen of architecture in the community."

The Size of School Buildings

The main section of the report is devoted to the size of school buildings. Large buildings, in the opinion of the Committee, do not serve the best interests of education.

"In every new project the number of pupils that should be seated in a typical classroom is always a subject of debate. Although it is primarily a scholastic subject, the plan is nevertheless profoundly influenced by its disposition. But, however important the size of the classroom unit may be, it is evident that the size of the school itself in-

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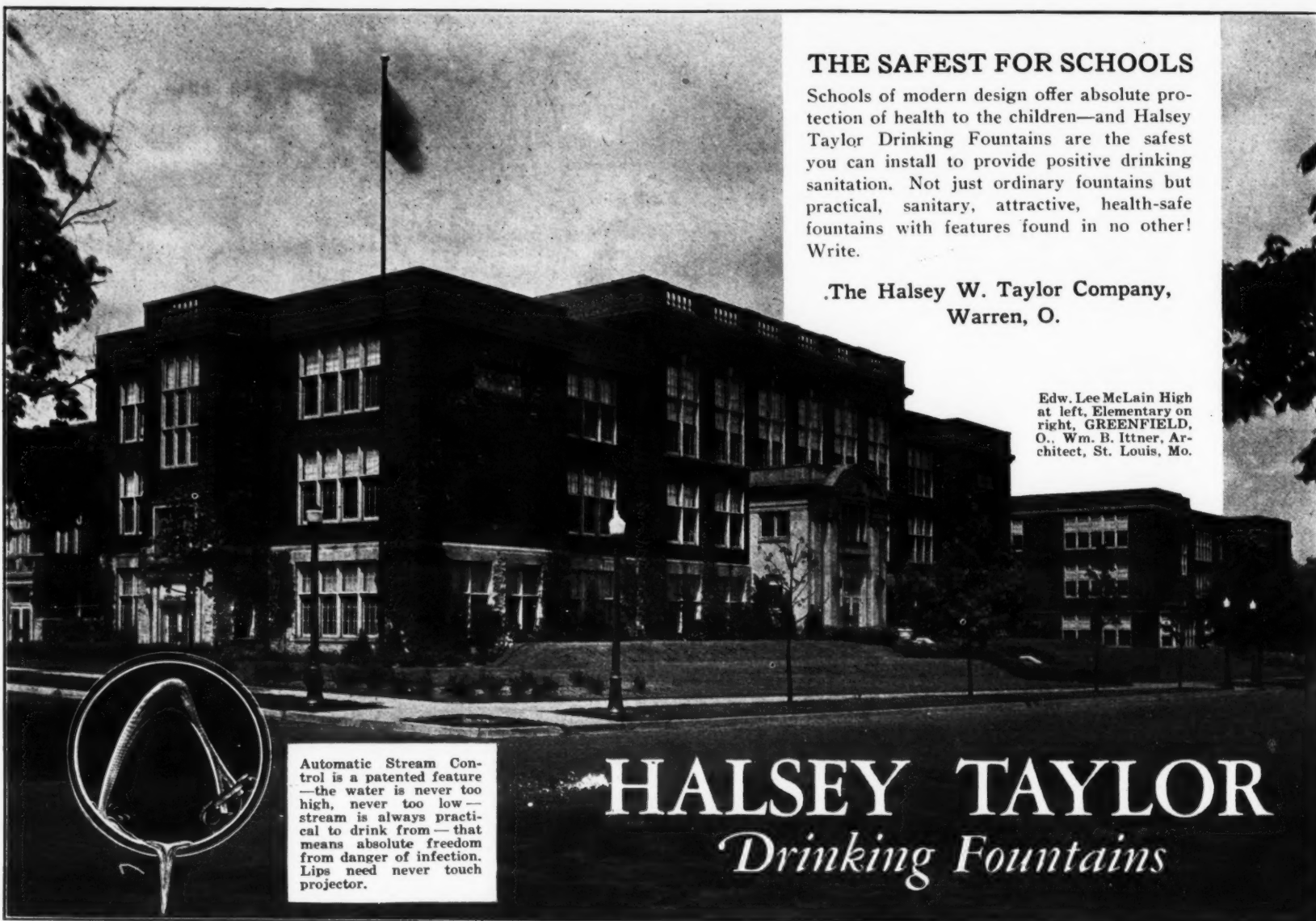
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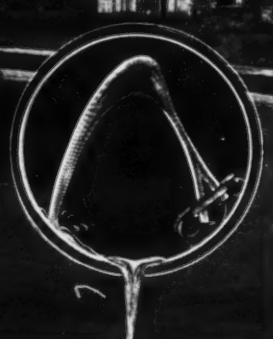


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Edw. Lee McLain High at left, Elementary on right, GREENFIELD, O., Wm. B. Ittner, Architect, St. Louis, Mo.



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HALSEY TAYLOR
Drinking Fountains

(Concluded from Page 114)

volves much more serious pedagogical and architectural questions, and it is curious to note that the more comprehensive viewpoint receives but scant attention.

"The size of the school concerns the architect. For if he is indifferent to the real objective of his client, he cannot expect to accomplish any worthwhile result.

"The tendency of the age in business enterprise is toward large concentration of capital, men, and machinery. The motive is to increase profits by lowering the cost of production. It is only natural for a board of education, composed in the main of businessmen, to pursue the trend of thought generally accepted as sound in their community, and to draw a parallel between the successful conduct of a pecuniary enterprise and the business administration of a school. It is on the way of becoming common practice to herd three to five thousand pupils under one roof and there are projects in the making of even greater magnitude.

"The claim is made that mass education lowers per capita expense. Teachers, however, are not cost accountants; they are only interested in their profession. They protest that the modern drift toward jumbomania tends to nullify their efforts. The situation is not without humor. In the larger schools at least, it is clear that as its business organization approaches perfection there is a noticeable slump in the quality of the product. Surely there must be something wrong with such a system.

"Does not the answer lie in the statement that efficiency in the use of money and efficiency in education are separate ideals, and that in many cases, no effort has been made to reconcile them? It may be that when the huge school fails to achieve its purpose, it is not chiefly due to its size but because its proponents are more interested in the reduction of operating charges than in learning.

"Difficulties in teaching and administration are so magnified by expansion that they become, at times, not merely greater handicaps but, in effect, new problems.

"The committee notes the dismay of the principals and the faculties, overwhelmed by the constantly increasing number of their pupils. Many leaders among the teaching profession are of the opinion that the size of a senior or a junior high school should not exceed 1,500 pupils. Some

authorities say that if results only are to be considered, the maximum should not exceed one thousand.

"Without violating these ideals it is conceivable that many thousand pupils can successfully pursue their studies under one roof, but only when the main approach to the problem is from the cultural and not from the money viewpoint.

"If there is a solution it must be sought in a new plan and not in the mere inflation of a scheme which may have served well enough other times and customs.

"The Committee does not feel that it is in possession of sufficient data to enable it to express an authoritative opinion on a matter which impinges on such diverse human interests. The city plan, the distribution of population, the friction inherent in transportation, all ponderable factors, are not even alluded to.



DR. EDWARD W. STITT,
Late Associate Superintendent of Schools,
New York City.

The Committee is headed by John Irwin Bright of Philadelphia, and includes in its membership the following architects: D. C. Allison, James O. Betelle, J. J. Donovan, William H. Gompert, Sidney F. Heckert, J. C. Hopkins, Clare Hosmer, William B. Ittner, Ellis F. Lawrence, Joseph C. Llewellyn, William O. Ludlow, W. G. Malcomson, W. R. McCormack, and F. A. Naramore.

DR. EDWARD W. STITT DIES

Dr. Edward W. Stitt associate superintendent of schools in New York City since 1923, and a member following a heat stroke. He was 64 years old.

of the city school system since 1884, died July 14, Dr. Stitt was born in New York City and received his education in the Thirteenth Ward School and in the College of the City of New York. Later he took graduate work and received the degree of Master of Science at City College, the degree of Ph.D. at New York University, and the honorary degree of LL.D. at Dickinson College.

He became a teacher in the city schools in 1884 and rose rapidly to a principalship. Later he was made a district superintendent and then associate superintendent. He devoted much time to vocational work, to the school lunch system, and to the night-school system. He was prominent in various educational organizations of the city. He is survived by a wife and two sons.

—Mr. E. O. Evans of Evansville, Wis., has been elected superintendent of schools at Monroe.

—Supt. William F. Little of Rahway, N. J., has been reelected for his eleventh consecutive term.

—It is announced that Mr. Elmer K. Sexton, senior assistant superintendent of schools at Newark, N. J., will be named acting superintendent of schools to succeed David B. Corson. The appointment is for a temporary period pending the appointment of a new superintendent.

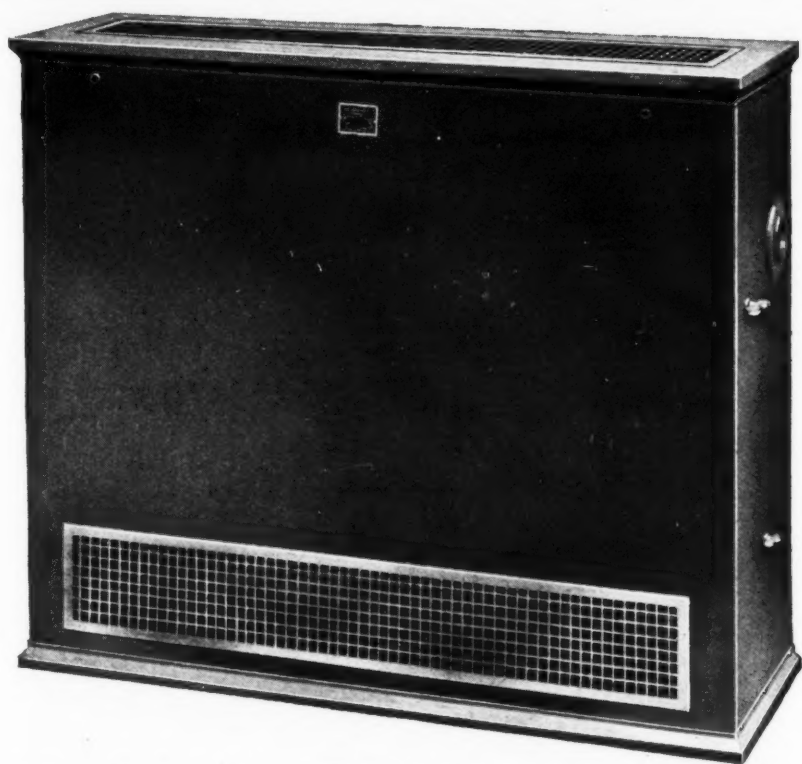
—Supt. C. R. Cobb of Bessemer, Mich., has been given a new contract for two years.

—Supt. A. R. Tiffany of Cresco, Iowa, has been reelected for another year.

—Mr. L. R. Creutz has been elected superintendent of schools at Janesville, Wis.

—Mr. Russell Tilt, building and supply commissioner for the schools of Alton, Ill., has presented his resignation.

—Mr. John Laur has been appointed school attendance officer at Niagara Falls, N. Y.



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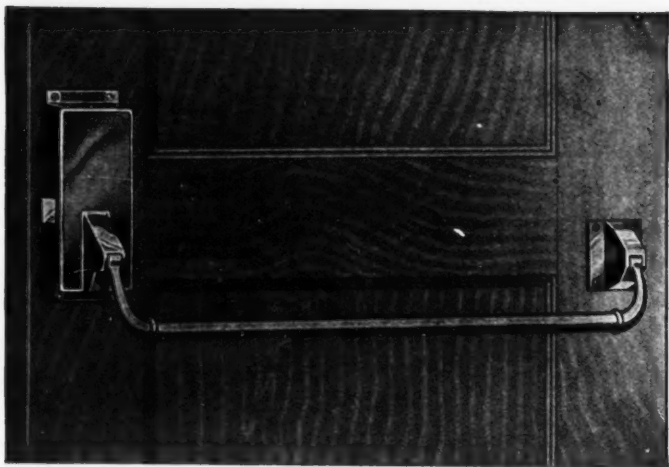
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SCHOOL VENTILATION LAWS

Mr. Thomas J. Duffield, executive secretary of the New York State Commission on Ventilation, writing for the Commission in the *Journal of the American Institute of Heating and Ventilating Engineers*, suggests principles to guide in the preparation of a model school ventilation law. School boards and other school authorities responsible for school-house ventilation will find the proposed basis of a law of considerable interest in that it is a radical departure from existing laws. Mr. Duffield will welcome criticisms and suggestions. His statement is as follows:

In those states which have enacted legislation regulating the ventilation of school buildings, such laws, or the regulations adopted in conformity with them, generally reflect the best practices in this art at the time of their adoption. However, the scope of such laws and regulations has usually been limited either specifically in the original laws or regulations, or in their application, with the result that in the smaller school buildings in villages and rural districts, ventilation has been seriously neglected.

The need for revision of much of the existing school ventilation legislation for the double purpose of bringing it up-to-date, and making it more generally applicable, is a matter that has been voiced by engineers and architects as well as by educational and health authorities. In response to requests for suggestions as to the matter that should be included in such legislation, the New York State Commission on Ventilation, has formulated the following:

Principles to be Included in a Model Ventilation Law General Provisions

1. After the passage of this act (adoption of this regulation) no school building shall be constructed, reconstructed, or enlarged until plans and specifications for such construction, reconstruction,

or enlargement have been approved (by the legally constituted authority) and a certificate of such approval has been received by the local board of education, school trustees, or other body within whose jurisdiction the school is (or will be) located.

All plans shall show and specifications shall fully describe the systems of heating and ventilation it is proposed to install. Such heating and ventilating systems shall conform to the standards herein-after provided.

Heating and Ventilation

1. Every school building hereafter constructed, reconstructed, or enlarged shall be provided with a heating system of sufficient capacity to heat all parts of the building, when adequately ventilated during the coldest weather, according to the following schedule:

- a) Corridors, gymnasiums, and shops, 65 deg. F.
- b) Swimming pools, and adjacent dressing rooms, 75 deg. F.
- c) All other occupied rooms, 68 deg. F.

Sources of direct radiation shall be so designed or protected as to prevent overheating of persons in seats adjacent thereto.

2. All classrooms shall have at least 15 sq. ft. of floor space per pupil and (including cloakrooms) shall be provided with a system of ventilation capable of avoiding unpleasant odors (such as are likely to accompany an increase of the carbon dioxide content of the air above 15 parts per 10,000), and, when the outside temperature is below 55 deg. F., of avoiding, without producing chilling drafts, an increase of room temperature above 68 deg. F.

Such ventilation shall be accomplished (a) by mechanical means; or (b) by the window-gravity method (in rooms having 100 occupants or less), or (c) by any other method which will attain the results specified above.

Special provision (preferably by mechanical means) shall be made for the ventilation of auditoriums, chemical laboratories, shops, cafeterias, and toilet rooms located in the buildings.

3. Every schoolroom used for instruction, study, assembly, and physical recreation shall be provided with at least one thermometer of a grade that will give a reading accurate to within 1 deg. F. The thermometer should be so located as to give a representative reading of the temperature at the breathing plane of the pupils.

4. An approved system of ventilation shall be maintained in operation whenever school is in session.

It is proposed that the provisions of the law shall be administered by means of detailed regulations to be adopted by the legally constituted authorities.

HYGIENE AND SANITATION

—At Grand Rapids, Michigan, a most thorough inspection of mouth hygiene conditions among children has been completed. The inspection was conducted by Dr. C. C. Slemmons of the health department. The results were enlightening. Only 872 out of 25,503 children were pronounced entirely satisfactory from a mouth hygienic standpoint. Almost one half of the children, 12,930, were classed as urgently in need of attention. The survey showed 51,924 cavities in deciduous and temporary teeth and 12,191 abscessed deciduous teeth.

—Teachers are healthy, at least when compared with workers in other occupations, according to the United States bureau of education. A recent report says: "A comparison of the average number of days' absence for the school year of teachers, industrial and civil-service workers, with the annual average of the latter groups reduced to two thirds so as to be put on an equal basis with the school year, shows 1.5 days for men teachers as compared with 3.39 for men workers in other occupations, and 3.49 days for women teachers as compared with 8.40 for women in the other industries."

—Sight-saving classes to the number of 265 are conducted in the United States to provide instruction for children with seriously impaired vision.

—Skin clinics for public-school children are conducted twice a week at Minneapolis, Minn. Free treatment is given children unable to pay for the service. Visits to the number of 1,933 were reported during the past year. In heart clinics, conducted once a week, 130 children were enrolled, and a number of follow-up visits were made. During the same period, 2,294 visits to the eye clinic were made by 995 children, for 817 of whom glasses were fitted.

—A crippled children's bureau has been organized in the New York State Department of Education, and a register will be kept of physically handicapped children. In cases of necessity, on order of the children's court, counties will be charged with the cost of the physical care and education of the

(Concluded on Page 121)

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A SOLID UNIT OF ELECTRICALLY WELDED OPEN HEARTH STEEL, MADE TO OUTLAST YOUR BUILDING.

WHEN school opens this Fall the health of teachers and scholars and the whole moral of the school depend on your heating plant. You will render your community and the children under your care a vital service by insisting on the proper heating plant for your new or renovated building.

The Ross Steel Boiler with the smokeless firebox, long combustion chamber, exceptional Crown Sheet area, plus extended hot gas travel and rapid circulation extracts the utmost of heat units from any fuel. The patented Convex full length, self-cleaning Crown Sheet banishes the usual accumulation of silt over the hottest part of the furnace and the consequent loss of heat.

The Ross Steel Boiler is especially adapted for burning oil and the cheaper grades of coal.

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We have just issued a new book which should be in the hands of every architect, engineer and school board official interested in economical, and silent ventilating and heating.

It provides a clear, easily analyzed discussion of the features of Duplex and Turbo Conoidal Multiblade ventilating fans, and explains why these fans are the only ones which combine the advantages of both the radial blade and curved blade types, without the disadvantages of either.

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Beauty of design and finish is a characteristic of NORCO Plumbing Fixtures. Yet, utility and durability have not been sacrificed in its attainment.

Every NORCO Fixture is designed to meet the requirements for which it is recommended in school service. Beauty, utility, and durability are embodied in every detail of construction.

The best proof of the success of NORCO Fixtures in schools, is indicated by their use for over 45 years.

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PIONEER MANUFACTURERS OF PLUMBING FIXTURES FOR SCHOOLS

(Continued from Page 118)

children. On approval of the state commissioner of health, half of the expense incurred will be reimbursed by the state.

In order that pupils suffering from defective hearing may be detected and provision made for their educational needs, the New York City board of superintendents has asked the board of education to include in the budget an appropriation of \$2,500 to provide for the employment of an aurist in the school for the deaf.

Erie, Pa. An antidiphtheria campaign was conducted in the schools during the early spring. The campaign was especially successful in view of the fact that there were practically five thousand consents. The antitoxin was administered to 2,972 children in the public schools, and to 1,824 in the parochial schools, making a total of 4,796. Full credit for the success of the campaign was given to the school medical inspection department as a result of the department's publicity work.

Correction of defects of eyes, ears, nose, and teeth of school children is reported by a number of districts in Virginia as the result of community efforts to arouse greater general interest in the physical well-being of children in the schools. Many districts report 100 per cent correction of dental defects, and at least one junior high school has demanded a certificate of sound or repaired teeth as a requisite to graduation.

Dr. J. S. Orleans of the educational measurements bureau of the New York State Education Department, as a result of a recent survey, finds that New York City is the first city in the state in providing educational facilities for crippled children. The survey reveals that New York City is the only city in the state which provides vocational training for homebound crippled children and the only one in which attention is given to crippled children in high schools.

The survey also shows that New York City is one of four cities in which special classes for handicapped children are graded; one of four cities in which transportation is provided for physically handicapped children; and one of the few cities providing medical, nursing, and convalescent care for its handicapped children.

HIGH-SCHOOL ADMINISTRATION

Student activities in the 38 high schools of New York City have been operated on a sound financial basis, according to the semiannual report

for January, 1927, issued by Mr. Frank A. Rexford, director of civics in high schools. The report shows that 33 of the schools financed all their activities and closed the term with a net profit aggregating \$57,864. Five of the schools reported losses amounting to \$3,879.

All of the schools, it was shown, closed the term with substantial balances in their treasuries, the total capital amounting to \$582,888. The Erasmus Hall High School of Brooklyn, with a capital of \$69,647, had the most flourishing organization in the city. The Erasmus High School made a net profit of \$6,117 on its activities during the term, while the Manhattan Trade School for Girls made \$10,066 through its operations, increasing its capital to \$65,771.

The 38 high schools through their organizations, had cash receipts amounting to \$735,330 and disbursed \$674,401. Other revenue amounted to \$236,727, while the expenses amounted to \$182,743.

New York, N. Y. The 38 high schools of the city will begin the fall term in September with a record-breaking enrollment of 145,910 students, according to estimates of the high-school principals made public by Associate Supt. Harold G. Campbell. This enrollment exceeds by over 6,000 the previous record, which was made during the term just ended.

The increases are attributed to the record number of new admissions to the high schools in September, which are expected to total 28,874, and which will exceed by over 2,000 the former record entering class of 26,901 students last February. There will enter 18,286 grades from the elementary schools, 8,408 from the junior high schools, 889 from the parochial schools, and 1,291 from other schools.

COOPERATIVE PURCHASING OF SUPPLIES

Mr. Robert L. Bird, county superintendent of schools, San Luis Obispo, California, in the June number of the *Sierra Educational News*, discusses the cooperative purchasing of school supplies. Some years ago the San Luis Obispo county boards attempted to form some sort of organization for cooperative purchasing of the ordinary supplies. This was done with some degree of success for one year, but was discontinued because it was impossible to find anyone who would be responsible for carrying out the necessary details.

Some of the clerks of the school boards had suggested to Mr. Bird that another attempt be made

at county purchasing. It was recognized that some effort should be made to protect the small schools against the overambitious agent. The matter was taken up with the county purchasing agent. During the year 1922-23 twenty-five schools accepted the plan.

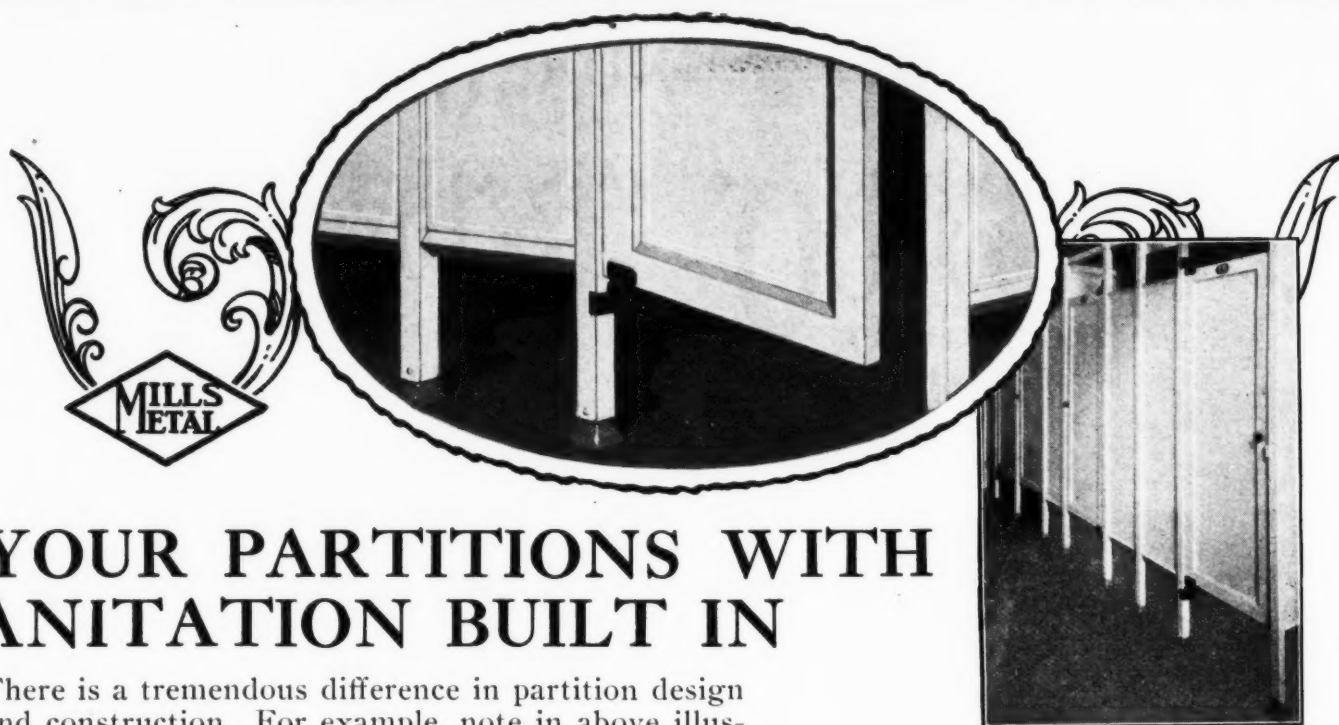
During the year 1921-22, some of the prices paid for common articles were: Pens, per gross, \$1.50; ink, per quart, \$1.50; paste, per pint, \$1; drawing paper, \$3.25; legal cap, \$5.40; blotters, per gross, \$1; cut news, per pound, 19 cents.

During the following year, with 25 schools represented, these prices were practically cut in two. Prices paid for the same articles were as follows: Pens, 75 cents; ink, \$1; paste, 65 cents; drawing paper, 90 cents; legal cap, \$2.16; blotters, 35 cents; cut news, 5 cents.

The plan proved a success from the first. In time all the schools of the county adopted it. Last year the prices for the same articles were as follows: Pens, 50 cents; ink, 60 cents; paste, 45 cents; drawing paper, 63 cents; legal cap, \$1.40; blotters, 27 cents; cut news, 4 1/4 cents. This year the prices are about the same. During the year 1922-23 and subsequently, the prices were quoted delivered to San Luis Obispo or destination. The saving on freight alone is quite an item. The estimated saving to the schools on supplies purchased through the county purchasing agent is \$5,000 per year. Visiting sales agents have been practically eliminated and time is saved to the teacher and school board.

All orders for supplies are accumulated and the entire shipment is sent to San Luis Obispo. Goods are inspected and checked there and orders are made up for the individual schools, to be taken by the individual who comes in from the district and is willing to take the package to the school. The system of rural supervision has aided also in getting the packages to the schools. Now schools get what they want and do not need to take more than is necessary. The office is in position to inspect the articles and make them right if there is a mistake in the shipment.

The only regret in carrying out the cooperative plan is that local dealers, doing a legitimate business, were practically eliminated from participating in the supply business. Practically all the dealers throughout the county have stated that the plan should be continued.



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There is a tremendous difference in partition design and construction. For example, note in above illustration of Mills Metal Toilet Partitions, how leg fits **over** rather than **into** the shoe. This eliminates crevices, lodging places for dirt, and not a single opening to admit water or hold moisture.

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JOHN KENNEDY OF BATAVIA PASSES

—John Kennedy, a pioneer educator of New York state, died at his home in Greeley, Iowa, on June 25. Mr. Kennedy early migrated from Iowa to New York state, where he became one of the first conductors of teachers' institutes for the state education department. He originated the Batavia system of individual instruction and became a strong advocate of simplified spelling. Mr. Kennedy was for 23 years superintendent of schools at Batavia, New York, but resigned to devote his time to spelling reform. He was the author of a number of textbooks on school methods.

The Batavia system as worked out by Mr. Kennedy, had for its purpose the improvement of instruction in the public schools. In Batavia it was put into practice in both the elementary and high schools. The essential feature of the plan was based on the belief that too much time had been given to recitation work; that both the brighter and poorer children were being sacrificed to the class system, and that the strain on teachers had been too great. In the working out of the plan, only one class was allowed to a room, unless there were more than fifty children, in which case there were two teachers and two classes, each teacher giving half of her time each day to helping pupils in their studies. Advantages claimed for the plan were that the pupils became more independent workers and made better individual progress. The plan was later adopted by a number of cities in other parts of the country, from Maine to California.

PERSONAL NEWS OF SUPERINTENDENTS

—Texas. The following have been reelected superintendents: L. J. Berry, San Marcos; J. J. Bates, La Pryor; E. W. Keyes, Gonzales; Irving L. Jackson, Merkel; J. W. Bright, Troup; O. C. Southall, Sagerton. The following are newly

elected superintendents: Thomas H. Tuttle, Port Neches; T. H. Leslie, Shiner; Sid Hardin, Mission; S. G. Boynton, Hutto; W. H. Korges, Elgin; E. A. Sigler, Plano; S. M. Melton, Cuero; J. D. Howell, Honey Grove; J. Hall Shepard, La Porte; X. Carson, Quitmah; Don H. Cude, Millet; Wm. Yowell, Comanche; Lem Stone, Channing; S. P. Coun, Rockdale; A. D. Starling, Bomarton; Miss Elizabeth, Coulter, Stiles.

—Dr. Augustus S. Downing, deputy commissioner of education of New York state, has announced his retirement on September 1, at which time he will have completed more than half a century of distinguished service in the field of education.

Dr. Downing went to the state education department in 1904, after resigning his position as principal of the training school for teachers. He served first as third-assistant commissioner in charge of elementary education and in 1908 was appointed



HON. VERNON M. RIEGEL,
Columbus, Ohio.

Mr. Riegel has announced his resignation as State Commissioner of Education.

assistant commissioner for higher education and director of professional education. In 1926 he was appointed deputy commissioner of education.

Dr. Downing during his term of office was responsible for the enactment of the university scholarship law, which commits the state to the support of higher education, as well as of elementary and secondary education.

—Mr. Roscoe Suiter has been elected superintendent of schools at Proctorville, Ohio.

—Mr. Orin Davis of Coalton, Ohio, has been elected superintendent of schools in Jackson county to succeed Lloyd Wharton.

—Mr. R. R. Miller of Danville, Ind., has been elected superintendent of schools at Plymouth, to succeed F. H. Berry.

—Mr. E. K. Wilcox, formerly principal of the South Kensington, R. I., high school, has been elected superintendent of schools for the next year.

—Mr. E. S. Kerr of Martins Ferry, Ohio, has been elected assistant superintendent of schools at Canton.

Supt. S. E. Weber of Charleston, W. Va., has been reelected for a two-year term.

—A farewell banquet was tendered to Mr. F. H. Bair by the residents of Colorado Springs, Colorado, in which the community paid tribute to the retiring superintendent. Mr. Bair goes to Shaker Heights, Ohio, where he will assume the superintendency in September.

—Mr. W. L. Ely of New Madison, Ohio, has been elected superintendent of schools at Gratis, to succeed S. S. West.

—Mr. John A. McDowell of Ashland, Ohio, will retire September 1 after completing nineteen years as superintendent of schools. Mr. McDowell in September will have completed 57 years of service as a schoolman.

—Supt. J. A. Cranston of Santa Ana, Calif., has been given an increase of \$700 in salary.

—Mr. E. D. Merriman of Anacortes, Wash., has been elected superintendent of schools at Buckley.

—Mr. L. R. Creutz of Monroe, Wis., has been elected superintendent of schools at Janesville.

—Mr. E. E. Crawford, principal of the high school at Napa, Calif., has been reelected to that position and has been given the duties of superintendent of the school district, of which Napa is the center.

(Concluded on Page 124)

The Economical Way of Heating and Ventilating School Houses

THE Heatovent system of ventilation provides the utmost economy when the factors of first cost, maintenance cost and operation cost are considered in relation to efficiency of results.

Simple units with no duct system mean low first cost.

Indestructible copper coils, and louvres, bronze bearings for moving parts, simple adjustments, ready accessibility for cleaning and highest grade furniture steel cabinet insure the minimum maintenance cost.

Operation of units only in rooms used, full thermal efficiency, provision for recirculation of air for quick warming of room before occupancy, reduce operating costs to the lowest practicable point.



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Heatovent

The Heatovent is low enough to fit under the window sill. It is only 13" in depth which means very little aisle obstruction and, if desired, can be recessed 5" leaving only 8" projection.

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400 Penobscot Bldg., Detroit, Mich.
1400 Broadway, New York, N. Y.
403 Military Park Bldg., Newark, N. J.

416 Essex Bldg., Minneapolis, Minn.
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1101 Realty Building, Youngstown, Ohio.

Portable—but decidedly not temporary



A wire will bring you an American Portable in time to relieve the congestion of fall enrollments.

The American Portable School is "portable" only in that it may be taken down in sections and moved to another place. This sectional construction does not imply a temporary building. When the building is completely erected, it is as staunch and sturdy as any "permanent" building. It will stand the rigors of time and weather as well as a building costing four times as much.

School authorities have come to recognize American Portable Schools as pleasant alternatives of the expensive building. Teachers and pupils are well content with the light, warm and sound-proof qualities they afford.

American Portable Schools are offered in the parapet wall and gable roof types and in one to six room units. Well insulated. Austral windows for ample light and air without draft. Flat ceilings. Gymnasiums and Bleachers complete the line.

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(Concluded from Page 122)

—Mr. A. E. Boyd of Whitesboro, Tex., has been reelected to serve a seventh term as superintendent of schools.

—Mr. J. H. Bradley of Lindsay, Calif., has been elected superintendent of schools at Modesto.

—The school board of Memphis, Tenn., recently failed to elect Dr. A. P. Finley as assistant superintendent of schools.

—The degree of doctor of education was conferred upon Supt. E. C. Broome, of Philadelphia, at the commencement exercises of Brown University.

—James Sullivan, assistant commissioner of education of New York state, was given the degree of doctor of laws at the commencement exercises of Syracuse University.

—Supt. P. H. Smith of Bayonne, N. J., has been reappointed for a five-year term, at an annual salary of \$11,000.

—Mr. Robert B. Lee of Bell Plaine, Iowa, has been elected superintendent of schools at Rawlins, Wyo., to succeed G. C. Bruton.

—E. D. Bloom of Kemmerer, Wyo., has been elected superintendent of schools at Pocatello.

—A. A. Slade of Casper, Wyo., has been elected superintendent of schools at Laramie.

—The board of education at Wheeling, W. Va., failed to reelect Dr. C. E. Githens as school superintendent.

—Mr. G. W. Greene of Buckley, Wash., has been elected superintendent of schools at Anacortes.

—The Oregon State Board of Education has elected the members of the new states textbook commission. The members of the commission are: Mr. J. A. Churchill of Ashland; Mr. G. W. Hug of Salem; Mr. A. C. Hampton of Astoria; Mr. R. R. Turner of Dallas, and Mr. Austin Landreth of Pendleton. Mr. Hug and Mr. Hampton were the only members of the commission to receive appointment. Mr. Turner was at one time a member, but resigned.

—Supt. Earl C. Van Dusen of Little Falls, Minn., has been reelected for the ensuing year, at a substantial increase in salary.

—Mr. Herbert I. Mathewson, for many years superintendent of schools at Milford, Conn., died May 16 at his home. Mr. Mathewson was a graduate of the Norwich Free Academy and of the New Britain State Normal School. Mr. Mathewson went to Milford in 1883 as principal of the school. Later he became superintendent of schools. He was a member of the Connecticut Teachers' Association and served as its president in 1914.

—Supt. P. C. Stetson of Dayton, Ohio, has been reappointed for a three-year term, beginning with September 1. Supt. Stetson, who came to Dayton in 1921, will have completed nine years' service with the completion of his term.

—Dr. Fred S. Shepperd, superintendent of schools of Passaic, N. J., has been elected president of the New Jersey Council of Education.

—Dr. Howard Pillsbury, deputy superintendent of schools at Buffalo, N. Y., has been elected superintendent of schools at Pelham, at a salary of \$10,500.

—Mr. C. Carl Alverson, principal of the Central High School at Syracuse, New York, has been appointed assistant superintendent of schools. Mr. Alverson will assume his new duties September 1.

—Mr. H. N. Swanson has been elected superintendent of schools at Annandale, Minn., to succeed

A. H. Granger, who has gone to Wells.

—Mr. C. A. Hudson, formerly principal of the high school at Fremont, Ohio, has been elected superintendent of schools.

—Supt. Carl Rohde, Jr., of Paxton, Nebr., has been reelected for another year.

—Supt. Robert Wheeler of Taloga, Okla., has been reelected for the next year.

—Mr. O. V. Rose of Prairie Valley, Okla., has been elected superintendent of schools at Bredon.

—Supt. I. J. Bright of Leavenworth, Kans., has been appointed chairman of a special committee to cooperate with the Kansas Schoolbook Commission in the approval of reference books, classics, and supplementary reading in the schools.

—Supt. F. H. Close of Wadsworth, Ohio, has been reelected for a four-year term.

—Supt. John F. Glandon of Jackson, Ohio, has been reelected for a term of three years.

—State Supt. Vernon Riegel of Ohio has announced that he will resign from the office of chief school administrator of the state. A group of forty schoolmen of the state recently called upon the governor and urged that he secure the highest type of schoolman to succeed Mr. Riegel, a man who is fully qualified to deal with all the problems of the directorate and qualified along various lines of educational work.

Mr. W. C. Griggs of Bessemer, Ala., who was recently elected superintendent of schools at Mobile, succeeds the late Mr. S. S. Murphy.

Mr. Griggs is a native of Alabama, a graduate of Howard College, and has completed graduate work at the University of Chicago and Harvard University.

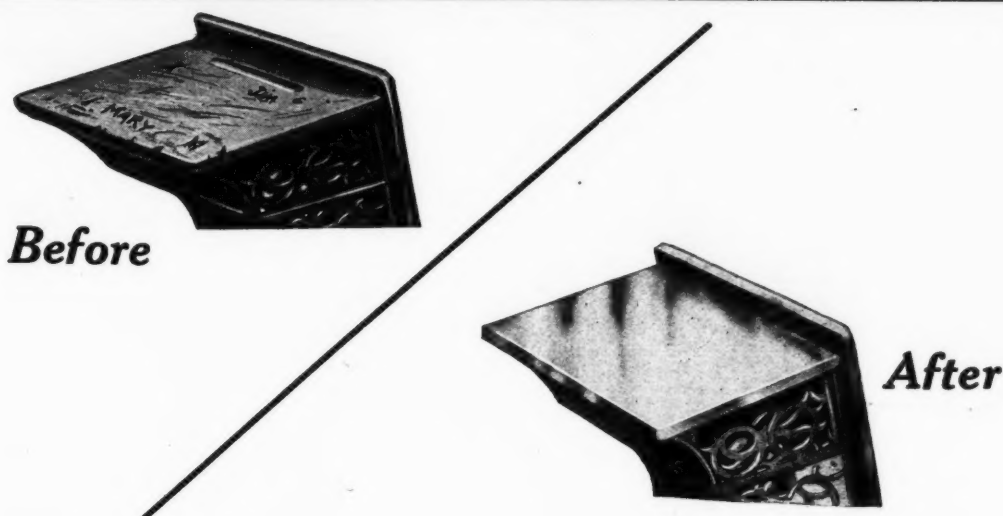
Mr. Griggs began his teaching career in the small-town school systems of Alabama. He became principal of an elementary school in Birmingham where he remained for five years. He was superintendent of schools at Gadsden for two years, and from Gadsden he went to Danville, Va. From Danville he went to Bessemer.

Mr. Griggs was a member of the committee which directed the changes in the Alabama constitution permitting taxation for public schools, and he acted as chairman of the committee which was responsible for the passage of the Alabama school code. He was secretary of the Alabama Education Association from 1904 to 1916 and was a member of its executive committee for five years. In 1920 he was made president of the Alabama Association.



DR. JOHN H. BEVERIDGE,
Superintendent of Schools, Omaha, Nebr.

Dr. Beveridge has been reelected by unanimous vote of the board of education. In its resolution the board expressed "sincere appreciation of his splendid accomplishment, the assurance of our confidence in his leadership, and our faith in his ability as an educator and administrator."



“Clarke Magic” can still make this change!

In less than four minutes, old desk tops can be made smooth as new. In 24 seconds, a square foot of ink-stained floor can be made gleaming clean. Act now—to have your school fresh and ready to welcome the returning pupils—in less than one month the magic change can be completed.

NO longer do leading schools permit their students to start with the handicap of scratched and marred desks. No more is it necessary to pay for costly, slow hours of hand sanding—and mussy varnish removal.

Zip! In less than four minutes—desks are made new! Whizzing sand paper cuts away the old varnish. Vacuum suction picks up the dust. The powerful, fast-cutting Clarke Vacuum Portable Sander goes after old desks and dirty, stained floors—makes them look like they did the day your school was first completed. Beneath the touch of this remarkable machine, gouges, scratches, knife scars swiftly disappear like erasing chalk marks from a blackboard.

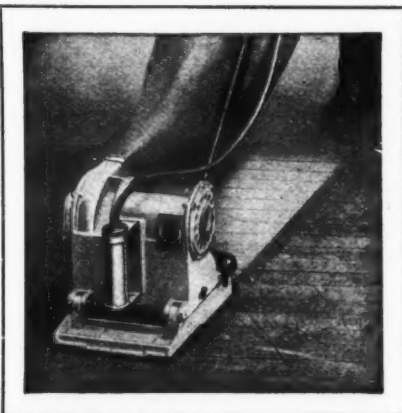
Any workman can easily use the Clarke. It connects to any electric socket. Weighs only 22 pounds—works anywhere. Easily finishes 120 to 200 desk tops in a day. Cleans and resurfaces 800 to 1600 square feet of floor in 8 hours.

Hundreds of schools, colleges, universities are already using the Clarke. They know that it saves them money on maintenance work. They know the advantages of keeping desks smooth and clean.

Extra Value—at no extra cost

Many schools make their Clarke Vacuum Sanders do double duty. They use them for maintenance work—they use them in manual training instruction.

Think of giving the boys in your manual training classes the thrill of using a real industrial tool—a machine found in the shops of General Motors—The Pullman Company—Steinway Piano—Western Electric—Goodyear Tire & Rubber Co.—Ford Motor



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For Shop Work— For Bench Work— For Floor Work

Everyone from boat builders to piano manufacturers is using this remarkable machine which your boys can use to make their training more valuable—more interesting—more practical. The Clarke Vacuum Portable Sander puts a satin smooth finish on the finest cabinet work—or it bites out a $\frac{1}{4}$ -inch planing cut in one time across a rough plank.

Before your school starts another year—get all the facts. There is no obligation at all—send the coupon now.

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RUSH the facts about the Clarke Vacuum Portable Sander—showing what it can do to save money and improve scholarship in our school.

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Indestructo Kindergarten Chair
Of the same sturdy construction.
Made in 11, 12, and 14 inch heights.
Per doz., weight 110 lbs.—price.....\$20.00



INDESTRUCTO TABLET ARM CHAIR,
slightly lighter than our No. 420 line but
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Indestructo Teachers' Desks with 2 drawers @ \$13.00; with 4 drawers @ \$17.00;
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INDESTRUCTETTE CHAIR for Teachers,
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quite so strong, or as heavy, as the Inde-
structo above but stronger than chairs made
of wood. Each, \$2.85.

More than 30,000 Indestructo Desks and Chairs sold during the 30 days June 15-July 15. Most of these orders were from former customers, among which are the following:

Jacksonville, Florida	2,863
Detroit, Michigan	2,465
Beaumont, Texas	1,477
Knoxville, Tenn.	1,282
Memphis, Tenn.	700
Phoenix, Ariz.	900
Tuscon, Arizona	1,200

Each of the above has in use from 1,000 to 24,000. Orders for lesser quantities received from more than a score of other cities.



NEW LEVELING DEVICE
which is now installed
without extra charge
See Price List below

COLUMBIA INDESTRUCTO CHAIR DESK

Back slats adjustable; Height and tilt of top adjustable; Top Leveling Device.

Large—\$4.95; Medium—\$4.80; Small—\$4.65.

Dovetailed hardwood drawer A \$1.50; Book Drawer with steel sides and bottom B \$1.15; Swinging flush top ink well 15c.

The greatest announcement during this school generation. Send for catalogue and list of over two thousand users.

The 24 points of a perfect desk as decided by Prof. C. A. Anderson of Stanford University and his Committee of over a score of leading educators

are all possessed by the Columbia. (See July, 1924, issue of American School Board Journal. A reprint will be sent on request.)

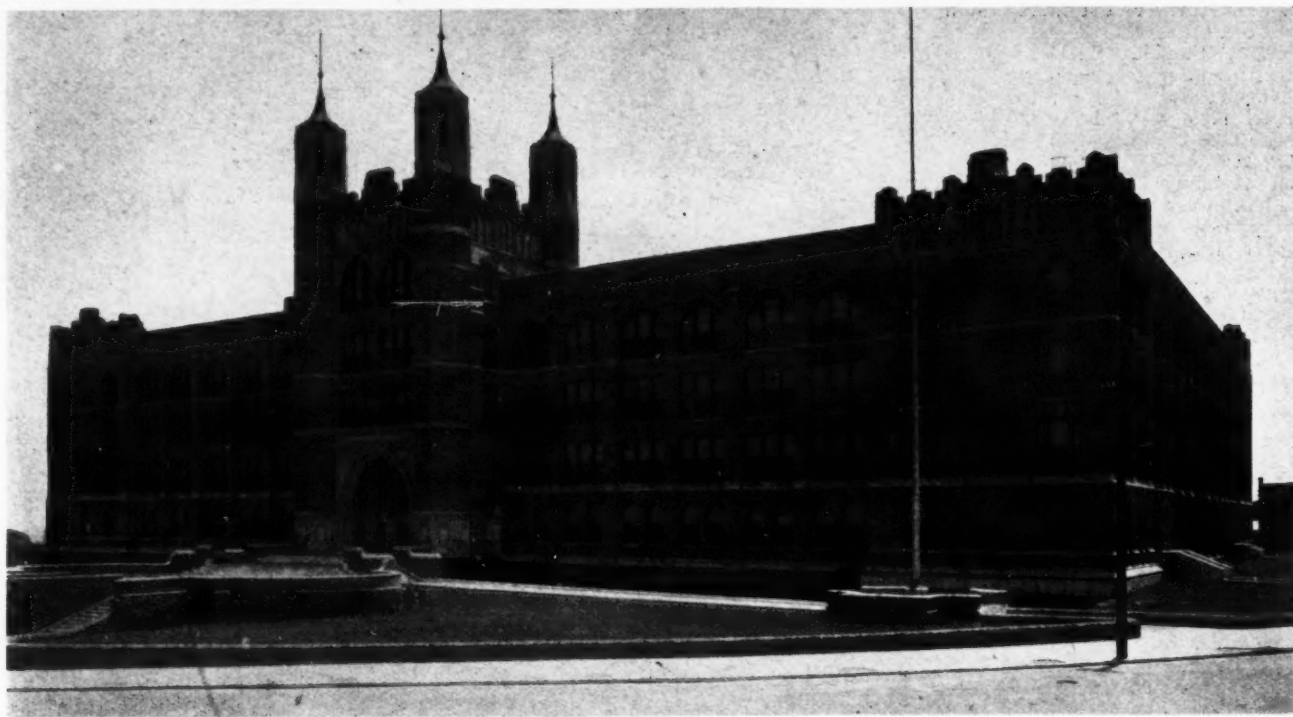
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- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Seat of proper height. 2. All corners rounded. 3. Seat saddled to fit body. 4. Seat of proper width. 5. Seat tilted higher at front. 6. Back tipped backward slightly. 7. Back curved to fit body. 8. Back adjustable in height. 9. Back of solid quartered oak. 10. Seat extends slightly under top. 11. Desk height adjustable to child. 12. Desk slant adjustable. 11 and 12 constitute a Tilting Top. | <ol style="list-style-type: none"> 13. Curved front feet give same strength and effect as separate support. 14. Desks easily moved for sweeping. 15. Noiseless, no hinges or swivels. 16. Arm rest extended backward. 17. Simplicity—Examine illustration. 18. Durability—Indestructible steel. 19. Finish, dull, lasting quality. 20. Flush top inkwell, noiseless, removable. 21. Box or sliding drawer. 22. May be used on either side. 23. Nothing to catch dirt. 24. Pencil groove on top. 25. Top leveling device. |
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THE PROGRESS OF THE DELAWARE SCHOOLS UNDER THE DELAWARE SCHOOL AUXILIARY ASSOCIATION

—Mr. Joseph H. Odell, director of the Service Citizens of Delaware, in his annual report of May 6, 1927, gives a report of the progress in school-building activities under the direction of the organization. Before attempting anything constructive in the way of building, the Service Citizens' organization has made it a practice of calling into its councils men and women of training and experience to aid in forming conclusions and formulating action. As a result, surveys were made of rural schools and a book of standards and plans of school buildings was compiled in 1925 by Columbia University experts for the use of school authorities of the state.

A study of the fiscal situation in Delaware has been made, comprising the income, taxes, expenditures, and indebtedness, in which there is an account of the total liabilities of the state and all of its governmental units. This report will shortly be issued in printed form as part of a series of studies in state taxation.

The report shows that ten schools for white pupils have been built entirely from the P. S. du Pont Fund, comprising 65 classrooms, with a pupil capacity of 2,820. The largest of these was the Thomas Bayard School in Wilmington, with a pupil-capacity of 1,500, which was erected at a cost of \$543,195.

In addition to these, seven schools were built partly by the du Pont fund and partly by local districts, comprising 78 classrooms, with a pupil-capacity of 2,470. The largest of these was a twenty-classroom building at Newark, having a pupil-capacity of 600. Of the total cost of the building, the D. S. A. assumed an expense of \$139,002 and the local district assumed its share of \$160,000.

The du Pont fund furnished the architectural and engineering costs for four schools, comprising 87 classrooms, with a pupil-capacity of 3,440. The largest of these was the Bancroft School, at Wilmington, which had a pupil-capacity of 1,600 and was erected at a cost of \$34,881 to the D. S. A. A. and \$645,600 to the city of Wilmington. The Gray School, also in Wilmington, had a pupil-capacity of 1,120 and was erected at a cost of \$32,342 to the D. S. A. A. and \$458,000 to the city of Wilmington.

A total of ten sites for white schools were pur-

chased and turned over to the Delaware State Board of Education. In a number of cases the Service Citizens' organization supplied the local school boards with architects' services and met obligations by counties and districts for which no funds were available. The total expenditures for this form of assistance amounted to \$1,899,692.

Mr. P. S. du Pont, who has since November, 1925, filled the office of state school tax commissioner, has reported that there is a surplus of approximately \$2,000,000 in the school treasury for 1927. This amount was made available by the legislature for the beginning of a school-building program, \$1,200,000 to be allotted to the state at large, and \$800,000 to the city of Wilmington.

Commenting upon other activities in promoting education in general within the state, the report states that an appropriation of \$32,200 was provided for two years' support of vocational education in the schools. In some cases, deficits in certain school districts were made up by an appropriation of \$60,442. The state board of education was given assistance in the amount of \$143,878 for procuring guidance and office help in redrafting the state school law for the legislature.

An important feature of the work was the establishment of a Bureau of Education which has carried on a yearly attendance campaign and an investigation of attendance by the pupil-enrollment campaign; supervised the work of the visiting teachers; assisted in making school budgets; gathered and tabulated school statistics; cooperated with state and local boards of education in a helpful way, and acted in an advisory capacity in educational matters.

AMONG BOARDS OF EDUCATION

—The citizens of Brewer, Maine, have asked the resignation of the local school board. The trouble arose over the dismissal of Principal Walter B. Sullivan of the high school, who had served in that capacity for fourteen years. The school-board members are elected by the city council and that body has been asked to oust the members and elect a new board.

—A school board which employs a teacher who is the son of a half brother of the wife of a member of the board is guilty of violating the Oklahoma anti-nepotism law, according to Attorney-General Edward Dabney. The latter holds that the statutes are counter to the employment of those related within the third degree.

—The school board of Oklahoma City has won its \$9,820 refund suit, as a result of a decision of the Oklahoma district court, which held that the common-school fund should receive credit for interest obtained from banks on money derived from bond issues. As a result of the decision, an order was issued directing the county treasurer to refund \$9,820 to the school fund.

—A summer school was conducted at Joliet, Ill., from June 13 to and including July 21, for the benefit of pupils who have become backward through illness, enforced absence from school, or inability to complete the work of their grade. The summer school was conducted on an expense basis, a tuition fee of \$1.50 being required of each pupil in attendance.

—The school board at Schenectady, N. Y., conducted a summer school from July 7 to and including August 23. A minimum of thirty days' attendance was required and no student was admitted to the examinations unless he or she had attended for that length of time.

—Corinth, Miss. Mr. Thomas Young, secretary of the school board, recently resigned, after eight years of service. As Mr. Young's daughter was graduated this year, he became ineligible for membership.

—Lynn, Mass. The school board has adopted a rule providing that corporal punishment may be limited to three blows on the hand, given in the presence of a witness, and with the permission of the principal. The rule was adopted as a compromise after the mayor had withdrawn an order for the elimination of corporal punishment.

—Reinstatement in the Toms River, N. J., school by the Dover Township board of education of thirty negro children, tuition pupils from Berkeley township, has been ordered recently by Commissioner of Education John H. Logan of Trenton.

In disposing of an appeal from the segregation by parents and guardians of eighteen of the children, the commissioner held that the board of education had failed to substantiate its contention that the children were segregated because they were subnormal and a menace to the discipline of the school. It was pointed out that ultimately the placing of the children in such a school would be determined upon a color basis, as is evident from the fact that not only the appellants but other negro pupils were sent there, and that no white children were ever placed among them.

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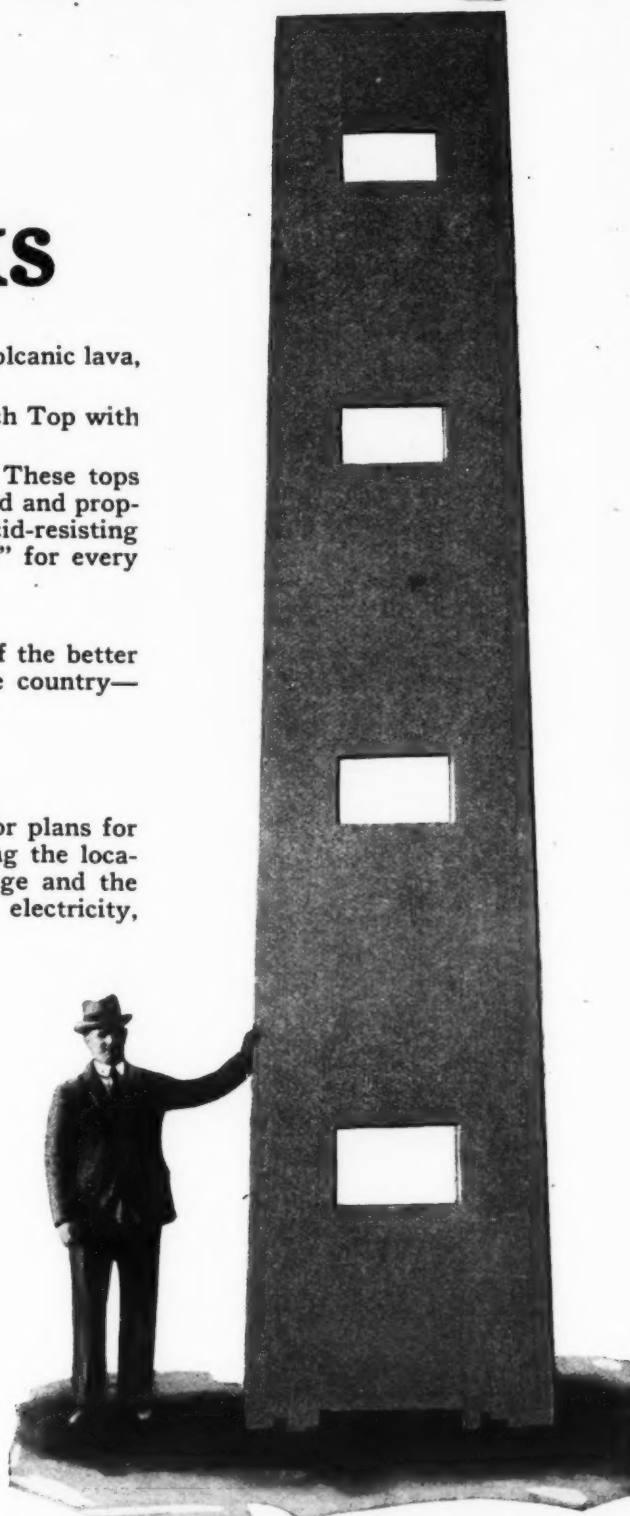
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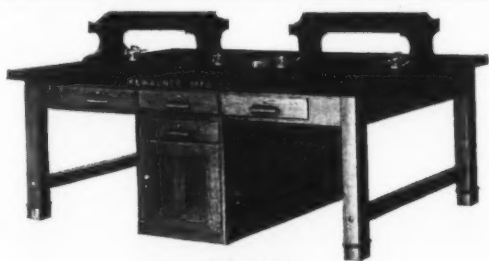
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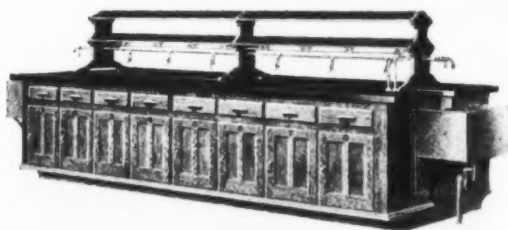
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The Problem of Financing the Rural Schools

(Continued from Page 55)

From the "total" column of Table III is obtained the distribution of the salaries of one-room districts in ten counties of the state each receiving from \$119.73 in Curry county to \$361.94 in Douglass county, from the two-mill tax.

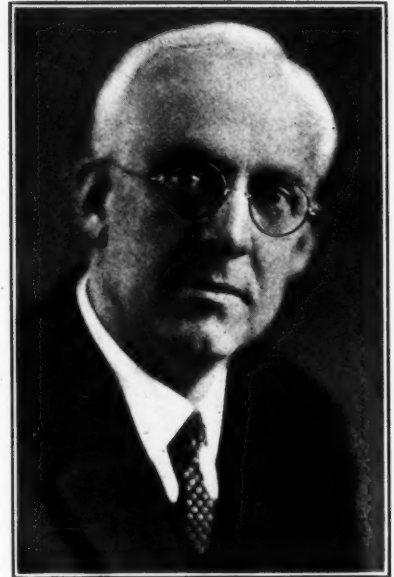
From the "total" column of Table IV is obtained the distribution of the census of 494 one-room districts in ten counties of the state each receiving from \$119.73 in Curry county to \$361.94 in Douglass county from the two-mill tax.

The median tax rate of the districts is 2.83 mills. The median ability of the districts is \$5,940.00. The median salary of the districts is \$94.34. The median census of the districts is 17.18.

It is a commonly known fact that the poorer districts in the state have to and do make the greatest effort to provide for their schools. In Table V is shown the distribution of the tax rate of 194 one-room districts all having more than \$5,750 assessed value per school child, and also of 198 having less than \$5,750 assessed value per school child.

There are two striking facts from Table V. In the first place, the median tax rate paid by all the districts is very low. It is evident that taxation for schools in these districts is not in any sense excessive or burdensome. In the second place, the districts having more than \$5,750 assessed value per school child have a lower median tax rate and a smaller standard deviation. This means that the more wealthy districts are making the least effort as a group and that the tendency is for them to group themselves closer to their median than those whose assessed value per child is below \$5,750.

The inequalities in ability to support education in the larger districts are seen from a study of Tables IV and V. From these tables one might get the idea that the smaller the district the more able the districts are to support education. It would seem that the one- and two-teacher districts are able to finance education with much less hardship than are the larger and first-class districts. This certainly cannot be true. It is not true in practice. It is a well-known fact that the large village district and the city district are the ones most able to pro-



MR. WEBSTER H. PEARCE,
State Superintendent of Schools-Elect,
Lansing, Mich.

Mr. Webster H. Pearce, on July 1, assumed the office of State Superintendent of Public Instruction of Michigan, succeeding W. L. Coffey. Mr. Pearce is a graduate of the Central Michigan Normal College of Ypsilanti, and holds degrees given by Albion College and the University of Michigan.

Mr. Pearce began his career as a teacher in the rural and small-town schools of Michigan. Later he held principalships at Albion and Adrian. He was an associate professor of Mathematics at the State Normal College for eight years and was professor of mathematics at Central State Teachers' College for ten years.

TABLE III The number of one-room districts in ten counties in Oregon paying various salaries and each in the same county receiving the same amount from the two-mill elementary tax.											
Salaries Per Month	Clockawas	Curry	Benton	Jackson	Wasco	Lake	Clatsop	Douglass	Union	Linn	Total
\$75-\$79	2	—	1	—	—	—	—	—	—	—	27
80-84	2	—	1	—	—	1	—	2	4	28	38
85-89	3	1	1	—	—	—	—	8	3	26	42
90-94	1	1	4	—	4	—	—	0	—	7	17
95-99	2	—	6	—	1	—	—	1	—	5	15
100-104	3	2	13	—	10	—	7	1	1	4	41
105-109	1	—	1	—	9	1	—	—	—	1	13
110-114	—	3	2	—	5	1	1	—	—	1	13
115-119	—	4	5	—	4	10	1	—	—	—	26
120-124	—	—	1	—	1	—	5	—	—	1	8
125-129	—	1	4	—	1	4	1	—	1	0	12
130-134	—	1	1	—	1	—	1	—	—	0	4
135-139	—	1	1	—	2	—	1	—	—	—	5
140-144	—	—	—	—	—	—	—	—	—	—	0
145-149	—	—	1	—	—	—	—	—	—	—	1
150-154	—	—	—	—	—	—	2	—	—	—	2
155-159	—	—	—	—	—	—	—	—	—	—	0
160-164	—	—	—	—	1	—	—	—	—	1	2
165-169	—	—	—	—	—	—	—	—	—	—	0
170-174	—	—	—	—	—	—	—	—	—	—	0
175-179	—	—	—	—	—	—	—	—	—	—	0
Above 180	—	—	—	—	—	1	—	—	—	3	4
	14	14	42	0	39	18	19	12	11	102	271

*No data for Jackson county.

TABLE IV The number of one-room districts in ten counties in Oregon having various numbers of census children, and each receiving the same amount from the two-mill elementary tax in each county.										
Census	Lake	Union	Douglass	Clatsop	Lake	Wasco	Jackson	Benton	Curry	Clockawas
0-6	9	3	8	1	3	1	1	0	3	1
7-12	28	7	20	4	10	13	8	6	6	0
13-18	27	10	23	3	5	13	8	5	5	6
19-24	19	4	11	1	1	6	7	9	1	8
25-30	11	5	9	1	1	6	13	5	—	4
31-36	6	5	5	5	0	3	3	3	—	15
37-42	—	3	10	—	1	2	3	4	—	9
43-48	—	2	4	2	—	2	1	1	—	13
49-54	1	—	2	2	—	1	1	4	—	8
55-60	1	—	—	—	—	—	1	2	—	3
Above 61	—	—	—	—	—	—	—	1	—	8
	102	39	92	19	21	46	46	40	15	75

TABLE VI Distribution of the assessed evaluation per school child enrolled in various size districts in ten counties in Oregon.						
Assessed Value Per Pupil in Thousands	2-Teacher Districts	3-Teacher Districts	4-Teacher Districts	5-Teacher Districts	Six or More	Total
0-2,999	25	4	4	4	23	60
3	20	3	4	4	14	45
5	13	1	4	0	3	21
7	6	3	0	0	3	12
9	3	1	1	1	—	6
11	3	0	0	2	—	5
13	1	0	—	0	—	1
15	0	0	—	0	—	0
17	1	1	—	1	—	3
19	1	—	—	—	—	1
21	1	—	—	—	—	1
23	1	—	—	—	—	1
25	2	—	—	—	—	2
27	1	1	1	—	—	3
29	1	—	—	—	—	1
31	0	—	—	—	—	0
33	1	—	—	—	—	1
35	0	—	—	—	—	0
37	0	—	—	—	—	0
39	0	—	—	—	—	0
41	1	—	—	—	—	1
43	0	—	—	—	—	0
45	0	—	—	—	—	0
47	0	—	—	—	—	0
49	0	—	—	—	—	0
51	0	0	—	—	—	0
Above 51	4	1	—	—	—	5
	85	15	14	12	43	169

vide for education without hardship or real sacrifice. This then, raises or implies the proposition that a comparison of ability between the city and rural districts cannot be measured in terms of assessed valuation of property. The value of assessed property in a city is no measure of the income of that city, which is the true

TABLE V Distribution of the tax rate in 194 one-room districts, all having more than \$5,750 assessed valuation per school child, and of 198 having less than \$5,750 assessed value per school child.		
Tax in Mills	No. Districts with Value Above \$5,750	No. Districts with Value Less than \$5,750
0- .99	41	13
1- 1.99	51	37
2- 2.99	35	33
3- 3.99	17	25
4- 4.99	19	27
5- 5.99	9	18
6- 6.99	9	8
7- 7.99	4	7
8- 8.99	2	7
9- 9.99	1	8
10-10.99	2	1
11-11.99	0	4
12-12.99	1	2
13-13.99	0	3
14-14.99	1	2
15-15.99	0	0
16-16.99	0	0
17-17.99	0	0
18-18.99	0	1
19-19.99	0	0
20-20.99	1	2
21-21.99	1	0
22-22.99	0	0
	md = 2.13 mills = 2.96	md = 3.64 = 3.64

measure of its ability to pay taxes. On the other hand, the assessed value of farm property is very probably a more reliable index of the ability of the owner of that property to pay taxes than is the same index on city property.

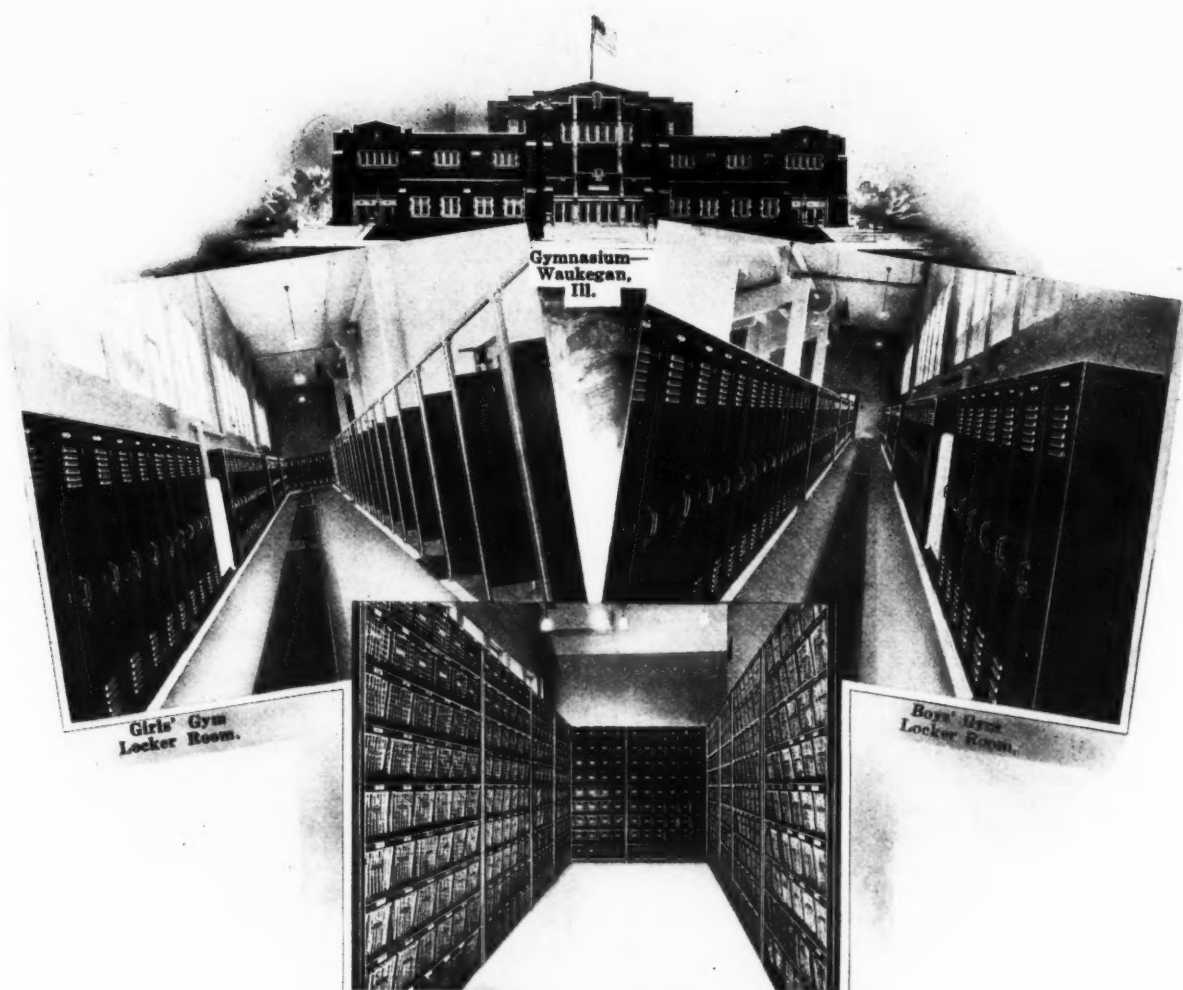
This fact is further emphasized by the data in Tables II and III. Here it is seen that so far as the tax rate is concerned the larger and first-class districts are taxing themselves many times as heavy as the small one- and two-teacher districts. It is known that city property can bear a tax rate of 25 mills without undue hardship on the property owners, while a tax rate of that amount on farm property would be little short of confiscation. This is true even though the property in each case be assessed at its true value.

Tables IV and VII contain facts which are very significant. They have an important bearing on the organization of districts for school support. The most significant fact is that, if

(Continued on Page 133)



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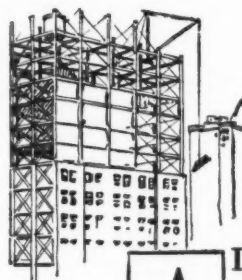
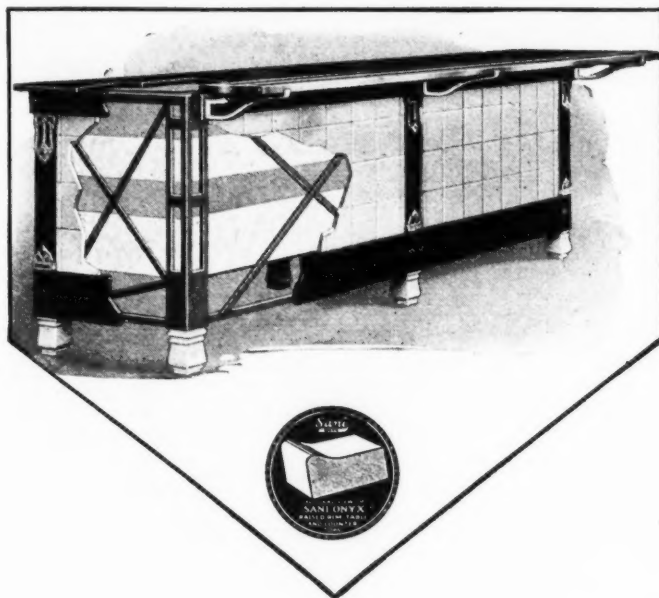
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(Continued from Page 130)

rural and urban property are organized together and taxed at the same rate, a greater burden is placed upon the rural or farm property than upon the city property. This applies directly in the case of union high schools where both rural and urban property are organized together and taxed at the same rate. It gives the urban taxpayer the better side of the bargain from the taxing point of view. Of course, the rural districts are getting the advantages of a first class high school which they might not have otherwise, unless they consolidated among themselves and left out the city or village district. This is not usually done, however. It is usually the

TABLE VII

Distribution of the assessed evaluation of taxable property per school child enrolled in first-, second-, and third-class districts in ten counties in Oregon.

Assessed Value	1st-Class Districts	2nd-Class Districts	3rd-Class Districts
Per Pupil in Thousands			
0-2,999	8	19	133
3	1	6	149
5	0	1	93
7	..	2	63
9	39
11	33
13	17
15	8
17	12
19	12
21	8
23	6
25	6
27	8
29	2
31	1
33	3
35	1
37	3
39	2
41	2
43	2
45	2
47	1
49	2
51 or above	15
	9	28	626

¹First-class districts are those having 1,000 or more census children.
²Second-class districts are those having 200-999 census children.
³Third-class districts are those having less than 200 census children.

TABLE VIII

Distribution of the tax rate in various size districts in ten counties in Oregon.	2-Teacher Districts	3-Teacher Districts	4-Teacher Districts	5-Teacher Districts	Six or More Teachers	Total
Tax Rate in Mills						
0-.99	2	0	1	0	0	3
1-1.99	10	0	0	0	0	10
2-2.99	3	1	0	0	0	4
3-3.99	9	1	1	2	0	13
4	9	1	2	0	0	12
5	8	2	1	0	1	12
6	5	3	0	0	0	8
7	3	1	0	2	0	6
8	6	0	0	0	2	8
9	6	0	1	1	1	9
10	3	2	1	0	1	7
11	2	2	1	1	2	8
12	3	0	0	0	4	7
13	1	0	0	0	2	3
14	4	0	0	0	1	5
15	0	1	0	1	3	5
16	1	1	0	0	5	7
17	0	0	2	0	4	6
18	0	0	0	1	4	5
19	2	0	1	0	0	3
20	0	0	1	1	3	5
21	0	0	0	1	1	2
22	1	0	1	0	1	3
23	0	0	0	0	0	1
24	0	0	1	0	1	1
25	0	0	0	0	1	1
26	0	0	0	0	0	0
27	0	1	0	1	0	2
Above 27	1	0	0	0	5	6
Total	79	16	14	11	43	163
	md = 5.81	md = 9	md = 10	md = 11	16.7	

city district that is advocating and initiating the consolidation.

Where such consolidation takes place it usually means that the rate of taxation for schools in the city is materially reduced—sometimes so much as fifty per cent, while the rate is generally raised over the rural property. A fight is not being made here against union high schools. There is no such intention, because the good that has come from consolidation for high-school purposes is inestimable. But the purpose here is simply to show the relation of the problem of equalization of the tax burden to the organization of rural and urban property into the same taxing units.

These facts are also related to the county-unit plan of support. They mean that if all property in the county is placed upon the same

basis and taxed at the same rate, there will result a decided advantage to the city taxpayer. From these facts it would seem that under the county unit of support there should be a distinction made between rural and city property. This can easily be done by excluding the city districts from the general county classification. The problem here would be: How large should the city be before it should come under a separate classification? The figures for Oregon would seem to indicate that both first- and second-class districts should not be classified with rural districts for purposes of taxation and support. The great difficulty with this whole problem of equalization is that all our efforts are just makeshifts to patch up the deficiencies of an antiquated system of taxation. It can not be done that way. The remedy must be more

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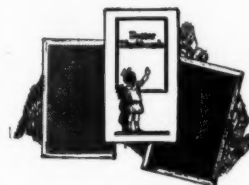
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fundamental. The burden of taxation can be equalized only when the tax is levied on the basis of true ability to pay. This basis of true ability is *not* the tax on real property.

TABLE VIIA

Distribution of the tax rate among first, second, and third-class districts in ten counties in Oregon.

Tax Rate	1st-Class Districts	2nd-Class Districts	3rd-Class Districts	Total
0-.99	..	..	42	..
1-1.99	..	..	98	..
2	..	..	71	..
3	..	1	57	..
4	..	..	48	..
5	..	..	44	..
6	..	..	25	..
7	..	..	17	..
8	..	1	14	..
9	..	2	15	..
10	..	1	9	..
11	..	1	12	..
12	1	1	7	..
13	1	1	2	..
14	0	0	7	..
15	1	2	2	..
16	1	3	3	..
17	0	3	3	..
18	1	3	1	..
19	0	2	2	..
20	1	2	3	..
21	1	..	11	..
22	0	..	above	..
23	1	..	21	..
24	..	0	..	..
25	..	1	..	..
26	..	0	..	..
27	1	1	..	..
Above 27	1	2	..	..
	10	27	493	..

Summary

The findings of this study may be summarized as follows:

1. The problem of educational support in Oregon from the state's point of view is the problem of adequately providing for its rural schools, and of equalizing the educational burden among the rural districts.

2. The state funds as distributed at present are not equalizing funds. They add to the inequalities which already exist.

3. Under the property-tax system of support, there is a fundamental difference in the ability of rural and urban property to bear taxation.

4. When rural and urban property are classified together and taxed at the same rate the greater burden of support is placed upon the rural property.

5. These facts are significantly important in the consolidation of districts for high school purposes, and also for the classification of districts under the county unit plan.

6. The whole question of what constitutes ability to support education needs investigation.

SCHOOL ADMINISTRATION

—Herbert E. Chamberlain has been elected director of the child-guidance clinic by the Minneapolis school board, at a salary of \$6,000.

—The school board of Medford, Mass., has dismissed Miss Mary P. Titcomb who had taught in schools for 21 years. Thereupon a mass meeting attended by 300 citizens demanded the reinstatement of the teacher and a public hearing. The school board by a vote of 6 to 3 has refused to reopen the case.

—The question of a shorter school day for younger children in the New York City public schools has been considered by the board of superintendents. The suggestion was made by Health Commissioner L. I. Harris and was indorsed at a recent meeting of the state medical society. Upon the suggestion of Principal Jacob Theobald of Manhattan, the plan will be given an experimental trial in the first-year classes of half a dozen schools during the coming year. In this way it is believed the school authorities can study the problem and determine whether the idea is practical before a general adoption in all the schools.

—"A few generations ago the word 'school' called to mind a teacher with a nondescript building or schoolhouse as a background; the plan of operation was intermittent and the results left to guess-work," said Robert G. Elting, business manager of the Billings, Montana, school system recently. "Today the term 'school' means an organization ranking among the most important in each community and requiring for its definite plan of operation a large share of the funds raised by public taxation and requiring also careful administration of such funds."

—Michigan Center, Mich. A fifth effort to give the city a new school and site failed recently when

voters rejected two bond issues, one for \$5,000 for a site, and the other of \$85,000 for a building.

—St. Peter, Minn. To protect its school buildings from defacement during the summer, the board of education has offered a reward of \$10 for information leading to the arrest and conviction of any person defacing or entering school property, or marking the walls of the schoolrooms.

—Evansville, Ind. The board of education will act as a board of censors when outside organizations send a speaker into the schools. The board will determine the fitness of the material to be presented as well as the character and fitness of the speaker.

—Suit has been filed in the Ingham county, Michigan, circuit court by the state to collect \$30,000 from Thomas E. Johnson, who was recently removed from the office of state superintendent. The suit is based on alleged shortages which auditors claim to have found in Johnson's accounts. It also includes salaries Mr. Johnson received as director of vocational education, which formed one of the charges of malfeasance in office. Mr. Johnson has denied the allegations and declares he is glad the matter has gone into court where it can be settled publicly.

—The \$3,200,000 rural-aid appropriation bill passed by the Texas legislature carries two important features. One guarantees salaries of teachers out of state and county funds for a term of not to exceed six months. The other provides that schedules of salary paid under state aid must be fixed by the state board, and that the number of teachers be restricted. A former law specified a certain amount as aid in maintaining weak schools but did not place a restriction on the number of teachers employed or the amount they could be paid. The state board of education must fix a salary schedule before teaching contracts in rural state-aid schools can be approved.

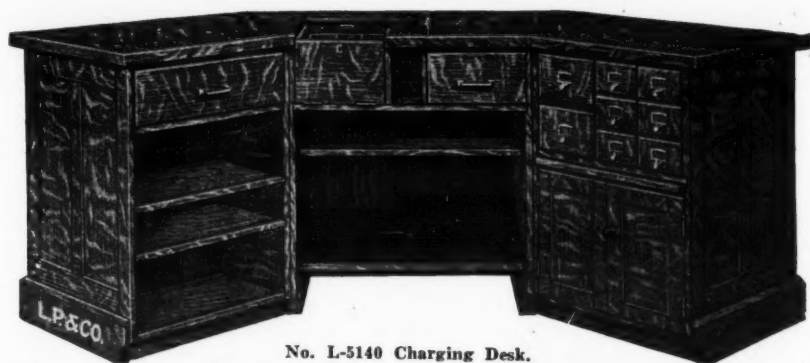
—Superior, Wis. The school year closed with the graduation of 283 high-school strikers. The graduates were part of a group of 800 students who went on strike in March. They remained out until May 2, when they returned to classes, made up their subjects and graduated.

—Chicago, Ill. The all-year school plan was begun in June with the adoption of a ten weeks' session in eight elementary schools. The plan was conceived by Asst. Supt. M. G. Hogge and is in the

(Concluded on Page 136)

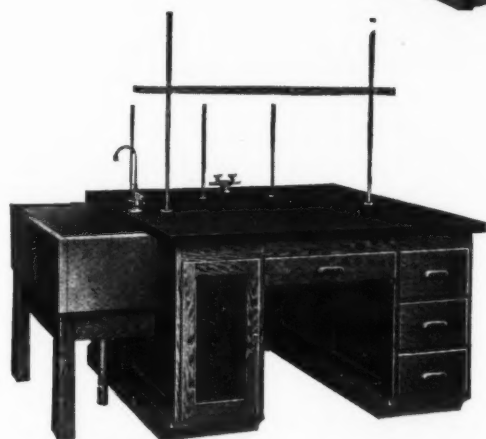
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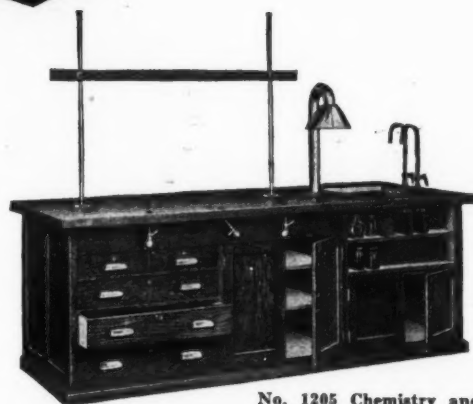


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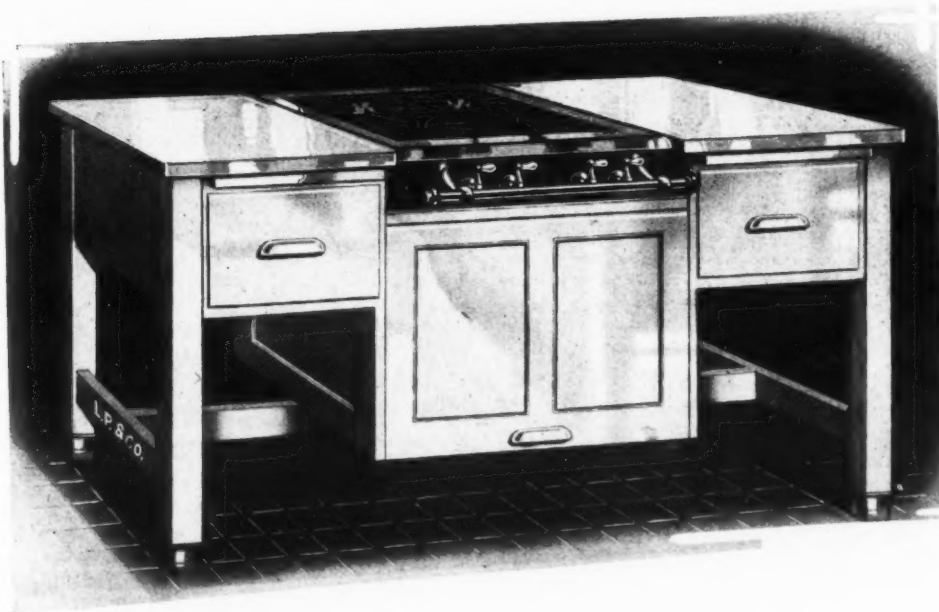
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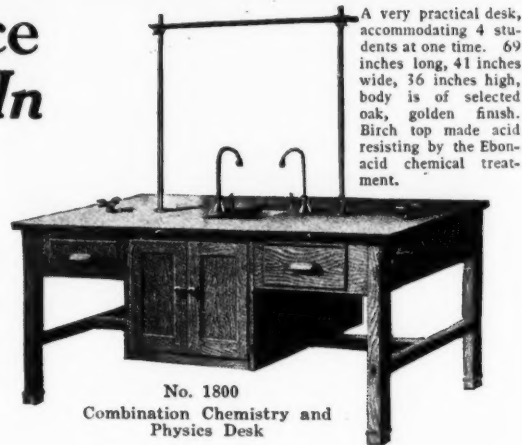
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(Concluded from Page 134)

nature of an experiment for the present year. In addition to the elementary schools, fourteen high schools will be operated as all-year schools.

—Pomona, Calif. A widening of the course of study in junior and senior high schools will be possible next year with the adding of more "solids" and the lengthening of the school day. Under the arrangement, students who are capable of carrying more than the present limited four "solids" will be permitted to take as many as eight "solids," or a full day of classes without the usual study hall periods. Students will not be limited strictly to courses for college entrance, but will be permitted to go outside of the routine of academic work. The school day will be increased from seven to eight periods. Teachers who have a great many papers to correct will be limited to six periods.

—The second annual summer school for upper grade students at Bellingham, Wash., closed a successful season. The enrollment increased to 120 students and the attendance was very high. The course was limited largely to students who are capable of taking advanced work. Students take the next half-year of work in the six weeks' course, and are promoted in the fall.

—The expansion of the city of Topeka, Kans., and improved school facilities in the remainder of Shawnee county, have reduced the number of tuition students in the local high school, according to A. M. Darnell, principal of the Topeka High School. The amount of tuition has decreased from \$1,620 in 1923-24 to \$851 in 1926-27.

—Savings in textbooks estimated at approximately a half-million dollars for a five-year period will be effected in South Carolina by a ruling of the state education department that an increase of not more than fifteen per cent over the wholesale price of schoolbooks may be allowed when the books are retailed. The reduction of the percentage by five will result in a large saving to the parents of school children in the state.

—Dr. H. B. Millhoff, president of the Dayton, Ohio, board of education after attending the meeting of the National Association of School Business Officials in Philadelphia, reported to his board that the standard school accounting and the standardization of school buildings and equipment, were in greatest demand. He contended, however, that adoption of a handbook and standard system of accounting, cannot be successfully accomplished

until the state laws governing the conduct of the public schools become more uniform.

—Supt. Clifford E. Shambaugh of Morris county, Kansas, reports that a preference is shown to men in the selection of school-board clerks.

—A delegation of mothers and fathers waited upon the board of education of Hutchinson, Kansas, to protect against tests and quizzes. Supt. J. W. Gowans explained the purpose of the test, being mainly to determine upon backward children who required individual attention. One thing was noted that the delegation did not complain of the teachers' work nor did they complain that their children had not done well in schoolwork. It was simply felt that the intelligence quizz had made a favored few in the schoolroom and worked against a harmonious feeling among the children.

—Further extension of the all-year school plan was recently urged by Warren A. Roe of the Belmont Avenue School, Newark, N. J., in an address before the Department of Elementary School Principals of the National Education Association at Seattle, Wash.

Mr. Roe pointed out that progressive and valuable as have been the proposals with reference to curriculum adjustment in junior high schools, it is particularly important to provide a reduction of nonpromotion and retardation through all-year schools. The wide adoption of shorter terms coupled with a better use of the great margin of time in children's lives not needed for healthful play, would be a long step forward in educational progress, in the opinion of Mr. Roe.

It is important, Mr. Roe maintains, that the all-year schools conform to national living conditions, and replace rigid administrative machinery by flexible regrading and reclassifying procedures that will bring the present regroupings into some sane relationships to the knowledge of individual differences.

—Racine, Wis. The board of education will amend its rules and regulations to include the following: "No principal, teacher, janitor, nor other persons in the employ of the board of education of the city of Racine, shall participate in any political campaign of any nature whatsoever, whether such campaign involves the election of any public officer or officers or the question of any public issue submitted to the voters, nor shall so-

called straw votes involving names of candidates for public office, be taken by any principal, teacher, or others in any school building of the city of Racine.

"Any principal, teacher, or other employee of the board of education, who shall be found guilty of any of the provisions of this section, shall be summarily discharged from his position.

"No person so discharged shall be eligible to re-employment by this board in any capacity whatsoever."

—Current expenses per pupil in average daily attendance in regular day schools during the school year 1925-26 amounted to \$104.82 in 35 cities of the United States having 100,000 or more population, according to the bureau of education. In 60 cities of 30,000 to 100,000 population embraced in the survey, the cost was \$92.85 for each pupil in average daily attendance; in the 70 cities of 10,000 to 30,000 population, \$85.38; and in the 82 cities of 2,500 to 10,000 population, the current expense for each pupil in average daily attendance was \$74.80.

LAW AND LEGISLATION

—The practice of Xenia, Ohio, township board of education in letting contracts to a certain local concern in violation of the state law providing that no member of the board shall have, directly or indirectly, any pecuniary interest in any contract of the board, is condemned in a report of the state examination of the records and accounts of Greene county schools, covering the period from September 7, 1924, to February 16, 1927. The examination was conducted by Ola P. Gunckel, state examiner, who declared that it was found upon investigation that three members of the township board are stockholders in an exchange company.

The Wisconsin legislature has killed a bill providing for an interim legislative committee to study the state educational system. It was proposed to make a survey of the schools as a basis for legislative action in 1929.

The bill intended to increase the size of the Milwaukee board of school directors from fifteen to 24 and to make the representation on the basis of approximately the present city wards. It was charged that the bill was an attempt on the part of the local socialist party to gain control of the school system.

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THE 1927 N. E. A. MEETING (Concluded from Page 56)

All administrative officers, state, county and city, should be selected on a basis of professional qualifications and attainment by boards of education.

State, county, city, and other boards of education should be elected on nonpartisan ballots, chosen at large from the areas which they are to serve and for relatively long terms, so arranged that it is impossible to select a majority of members of a board at any one election.

The distinction between lay control of public education and professional administration of schools should be acknowledged by law and in the rules of boards of education. Appointment of teachers and all other employees should be only upon nomination by the superintendent of schools.

Schools should be financed upon a state-wide basis.

The movement to build at Vincennes, Indiana, a great memorial to George Rogers Clark, Revolutionary War hero, as an inspiration to all Americans of unselfish, patriotic service, is indorsed.

Although a great variety of subjects were discussed at the convention, the dominant problem in the minds of the delegates seemed to be the relation of the school to the community and to the country at large. Instead of studying the pupil and his individual welfare, educators concerned themselves chiefly with the quality and nature of the product they were delivering to the country; their contribution to democracy and the type of American citizens they are creating. In this important development work they believe it is becoming increasingly necessary carefully to guard American schools from outside interference on the part of politicians and special interests.

These sentiments were well expressed by Dr. Henry Suzzallo, former president of the University of Washington, in his 4th-of-July convention-opening speech, "A Declaration of Independence for the American School System."

"The schools of the United States should be guaranteed an autonomous status and mode of operation, which would allow them to develop and perform their functions without undue interference from social and political forces inimical to their welfare," declared Doctor Suzzallo.

"Too often school boards are appointed by the governor as a matter of convenience, instead of being elected by the people. This often leads to the appointment of politically minded, rather than educationally minded trustees or regents and in extreme cases to puppets who merely do the governor's will. A city mayor should have nothing whatever to do with the control of schools, which should be in the hands of a special board of education elected directly by the people. Chicago is an example of a city where the most disgraceful demagoguery of recent years has dragged the school management through a campaign of misrepresentation almost unparalleled.

"The people of the United States are beginning to respond to pressure to use the public schools for propaganda—good, bad, and indifferent. Special interests insist that certain days and weeks be set apart for specific purposes. This opens the way for every organized interest to work on youth, which in its plastic innocence is an easy victim. In a single week 54 such requests came to the desk of a single public-school administrator."

Another speaker referred to the Carnegie and Rockefeller foundations as examples of outside interests seeking to influence the public schools. It was pointed out that representatives of these great aggregations of wealth are working on the theory that education should be given chiefly to those best able to receive and profit by intellectual training. This reversion to special class legislation was vigorously opposed by the teachers. Other delegates, including Doctor Suzzallo, saw no menace in the educational foundations mentioned, stating that their policy is to turn more and more research work over to professional school people.

Following are some of the other outstanding sentiments expressed at the convention:

Francis G. Blair, Illinois state superintendent of public instruction: "The American school playground is the greatest kindergarten Democracy has conceived. True, there are some rough practices here, but children will have to deal with rough characters in after life; therefore, they should early learn how to meet the methods used by such individuals. Barnum took cubs and kittens of the jungle and put them in a cage together, where they were forced to learn how to get along with each other."

Cornelia S. Adair, N. E. A. president: "Corporal punishment is a relic of the past and has no place in the modern schoolroom. It is inefficient, undignified and unnecessary. The saddest sight I know of is a child cringing in terror before an angered teacher, who stands over him with a whip."

E. E. Oberholtzer, Houston superintendent of schools: "The wise public-school administrator invites cooperation and participation from his teachers both in setting up and achieving goals. Furthermore, teachers should be privileged to enter into and help initiate new movements, in order fully to enjoy the satisfaction which comes from such achievements."

NEWS OF OFFICIALS

—Mr. Harry D. Payne, supervising architect of the Houston, Texas, schools, has been invited to serve on the committee on school-building standards of the American Institute of Architects. Mr. Payne will work on a part-time basis, giving a part of his time to the general supervision of the school-building program of the schools.

—Rev. A. T. Ekblad has been reelected president of the school board at Superior, Wis. Mrs. Agnes Black was reelected as vice-president, and Mr. L. A. Nichols will continue as secretary of the board.

—Mr. Edwin Hedberg of Fort Atkinson, Wis., has been elected treasurer of the school board, to succeed E. H. Miles.

—Mr. R. T. Kingsbury of Keene, N. H., has been appointed a member of the New Hampshire State Board of Education.

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RELATION OF THE SCHOOL BOARD AND THE SUPERINTENDENT

(Continued from Page 52)

Three recognized principles of good business administration are: (1) Giving the executive large powers to conduct the business; (2) holding him absolutely responsible for the achievement of results; and (3), expecting him to initiate new policies. By the application of these principles, school boards can accomplish real results; for through them, all activities are coordinated. Coordination means economy.

Converging as they do in the superintendent, all business activities are carried on from the educational viewpoint. Since the expenditure of every dollar should be determined by the touchstone, "What will be for the highest good of the child?" this union of the educational viewpoint with the principles of business administration is bound to give a community a more efficient school management than is possible under uncoordinated, divided and befogged responsibility.

EDITOR'S NOTE—The following newspaper article is typical "copy" prepared by Mr. Rahn as a means of keeping the school board and the community in touch with the schools. It is reproduced with a few omissions as a suggestive form of school publicity.

WHAT DOES IT COST TO

OPERATE THE LISBON SCHOOLS?

How Does Lisbon Compare With Other Districts?
 Since public education is such an important factor in the life of a community, and since the work is paid for through taxation, it is but reasonable to suppose that many citizens will be interested in an analysis of school costs.

In answering the question "What does it cost to operate our schools?" a comparison with the financial affairs of other school districts is necessary; for mere statements as to cost in dollars have little significance to the average person unless he be given definite standards of comparison. Accordingly, in this article available figures for North Dakota and Minnesota schools will serve to set forth such standards.

What Part of the General Tax Is Collected for Operation of the Schools?

One of the first steps in the consideration of school costs is to determine what proportion of the General Tax is collected for the operation of the schools.

For purpose of comparison County Auditor J. A. Gray kindly furnished on request the tax levies in mills of ten cities the size of Lisbon, which cities were chosen by him at random. To make a fair comparison, the millage itself could not well be taken; for the

assessed valuation in the various communities varies considerably from year to year. For instance, the Lisbon district's valuation in 1923 was \$1,774,386; Enderlin's was \$1,555,729. In 1926 Lisbon's valuation was \$1,448,307; Enderlin's \$1,518,668. From this it will be seen that a consideration of flat millage for these cities would not yield valid results for comparison.

But to take the total tax millage for each community and compute what proportion thereof is devoted to the operation of schools yields data that for purposes of comparison is significant. In other words to ascertain how many cents out of each tax dollar is collected for the operation of the schools furnishes data for comparison that has considerable reliability.

From this study it was found that out of each tax dollar the following cities spent the cents for operation of schools that is set opposite each name:

Cooperstown—\$.422.	Enderlin—\$.3616.
Mayville—\$.3977.	Wahpeton—\$.361.
Lidgerwood—\$.392.	Cassleton—\$.3587.
Hillsboro—\$.385.	Ellendale—\$.349.
Kenmare—\$.3678.	Oakes—\$.3188.

LISBON—\$.3181.

The term "Operation of Schools" does not include levies for Sinking Funds and interest; for since this varies so much with the different communities and their financing of building programs in the past, such a comparison would not be valid in determining the present support being given to schools. The bond situation will be considered in a separate article.

How Many Dollars Did This District Spend in 1925-26?

After finding that Lisbon stands at the foot of the list in the number of cents out of each tax dollar devoted to the operation of schools, the next logical question to ask is "How much money did Lisbon spend for the operation of its schools in 1925-26?"

The following is an analysis of the clerk's report for that year:

Total of clerk's annual report.....	\$51,099.34
Less Certificate of Indebtedness and interest paid	1,721.06
	\$49,378.28

Less transfer to county treasurer from sinking and interest funds for payment of bonds	\$11,873.89
	\$37,504.39

Less transfers from one fund to another.....	1,500.00
--	----------

Total of warrants issued in payment of goods and services purchased	\$36,004.39
Less warrants issued for capital outlay.....	1,042.11

	\$34,962.28
--	-------------

Less one-half of premium on two-year insurance policy	400.16
---	--------

Total current expenditures for 1925-26.....	\$34,562.12
--	--------------------

"Current Expenditures" include all payments made during the year with the exception of interest charges, payments of bonds and capital outlays.

How Does This Amount Compare With Other Schools?

The next question that suggests itself is, "How does this amount compare with that spent by other schools?" To answer this question, the number of pupils taught in the various schools must be taken into consideration; for it is obvious that it will cost more to

operate a school of five hundred pupils than one of three hundred fifty. Accordingly, to make a fair comparison, the current expenditures per pupil in average daily attendance for the year must be computed for the various school systems considered.

Dr. Fred Engelhardt of the Educational Administration Department of the University of Minnesota recently completed a survey of the school system at New Prague, Minnesota. In the monograph on his findings, a comparison is made as to the school costs in that city with those of twelve other selected school districts under 2,500 population.

Since the cost accounting system used in the Lisbon schools is the same as that employed by Dr. Engelhardt in his analysis of school costs, a comparison is valid; for in each case the terminology is the same.

Following is the tabulation of the 1925-26 Current Expenditures and per pupil costs in Lisbon, North Dakota, and those Minnesota school districts selected by Dr. Engelhardt for the New Prague Survey:

School District*	Total Current Expenditures	Enrollment—Elementary	Enrollment—Total	Average Daily Attendance	Current Expenditure per pupil in Average Daily Attendance
Fertile	\$23,631	193	327	289	\$82
Harmony	23,999	181	300	266	90
Lake Crystal....	24,530	222	325	290	85
Le Sueur.....	28,011	176	279	249	112
Long Prairie....	48,147	229	488	424	114
Montgomery ...	24,948	139	242	223	112
New Prague.....	31,415	140	312	281	112
Osakis	38,635	247	404	353	109
Preston	34,872	204	360	349	100
Renville	41,480	316	463	392	106
Rush City.....	24,518	215	351	312	79
St. Charles.....	30,992	256	386	346	90
Stewartville....	24,551	176	291	276	88
LISBON	34,562	313	505	462	75

*Data presented to the nearest dollar.

Lisbon's Per-Pupil Costs Are Low

From the above table it will be seen that the 1925-26 per-pupil costs of education to the Lisbon taxpayers was \$75. This is four dollars less per pupil than the next lowest cost. It is thirty-nine dollars less per pupil than the highest cost.

Quality Not Sacrificed

That the district is not sacrificing quality in its efforts at economy is evident from the recent article carried in these columns on the results of the Stanford Achievement Tests, which were given in the local schools. These tests, as will be remembered, gave a very good rating to the educational efficiency of the Lisbon schools.

How About High-School Costs?

At this point the query may well be propounded, "What percentage of the total current expenditures are devoted to high-school purposes in Lisbon?" The cost of operating the high school last year was \$17,973. This is 52 per cent of the total current expenditures of \$34,562.

As revealed in the New Prague Survey, the median or average percentage of annual current expenditures devoted to high-school purposes in 142 Minnesota districts was 52 per cent.

(Concluded on Page 143)

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THE BALL-BEARING OFFICE MACHINE



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This means speed and full capacity day after day without fatigue.

But speed is only one of many reasons for LC Smith's great popularity. Its many convenience features save hours of the operator's time. For example, note the half-spacing feature illustrated and described below.

LC Smith & Corona School Service—how you can benefit by it

Instructors in typewriting may now avail themselves of the most advanced methods of teaching, incorporated in the typing test material supplied free of charge by our School Department.

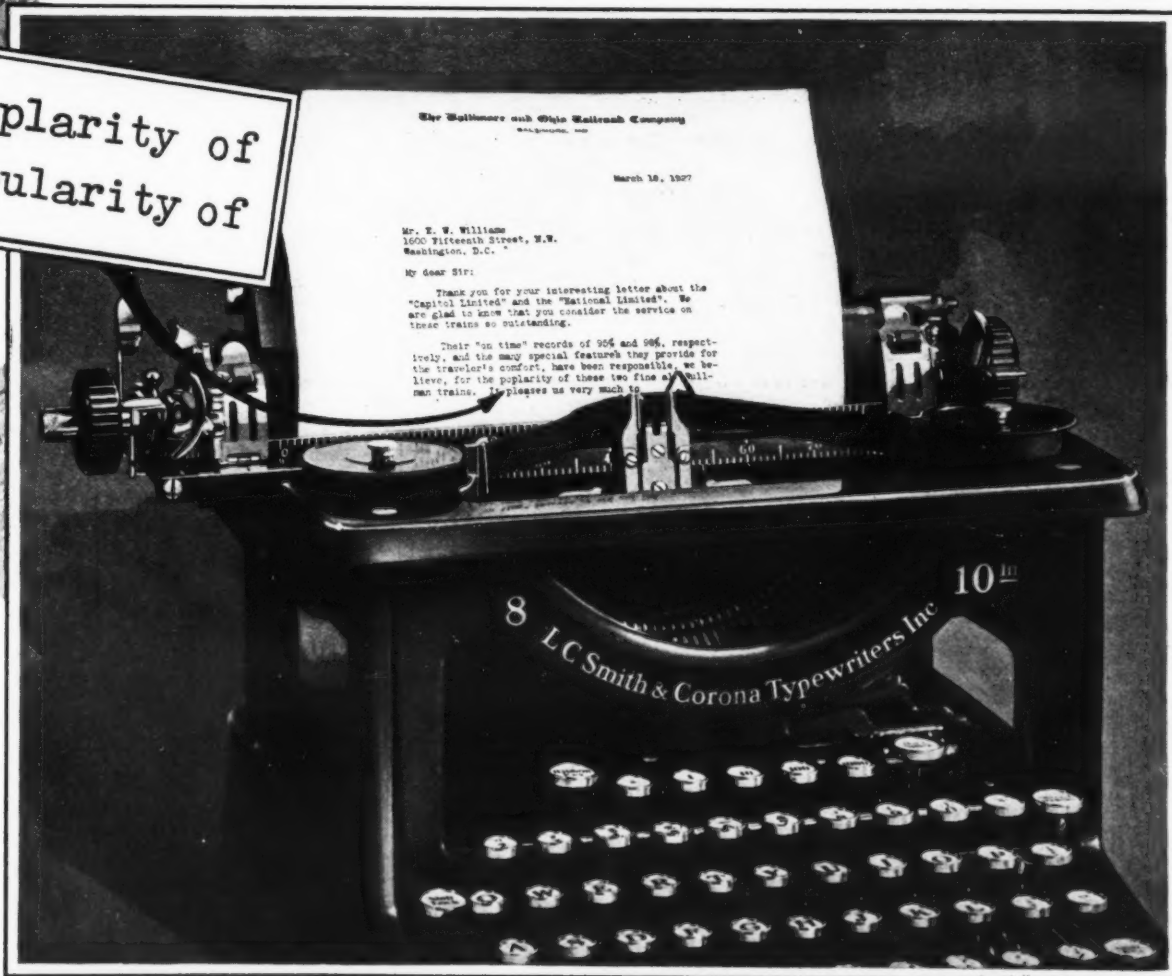
These methods include charts prepared by Mr. D. D. Lessenberry, instructor in Typewriting at Allegheny High School, Pittsburgh.

The Letter Combination Chart is based on Ayres' Most Frequently Used Words, and the Error Chart upon an analysis of errors found in more than two thousand typing test papers. Drills in rhythm, movement, right and left hand frequency combinations, speed, etc., are also presented.

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Why rewrite the whole letter?

When a single letter of a word is omitted, stenographers ordinarily have to rewrite the whole page. The half-spacing feature of the LC Smith enables the operator to rewrite the word correctly in the same space—as shown above. A glance in the waste basket at the end of the day will reveal letters that were rewritten for that reason—letters that represent time and effort which could have been saved on an LC Smith.

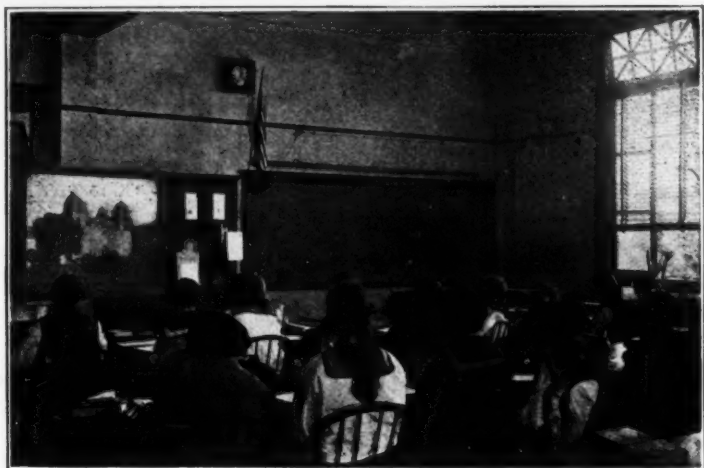


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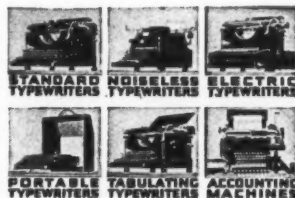
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GOES LITHOGRAPHING CO.

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(Concluded from Page 140)

tricts having a population of less than 2,500 was between 50 per cent and 54 per cent.

Accordingly, it may be said that the Lisbon school district spends the same proportion of its total budget on secondary education as does the average district.

In reports to the North Dakota State Department of Public Instruction, total high-school enrollment is used as the basis of determining high-school costs per pupil. On this basis the 1925-26 cost per High-School Pupil was \$93.57. The mean or average cost per high-school pupil in the first class high schools of the state for 1925-26 was \$105.67, which is \$12.10 more per high-school pupil than is spent in Lisbon.

The Distribution of School Costs

To return to the total 1925-26 current expenditures of \$34,562, the questions may well be asked, "How is this amount spent? To what services is it devoted? How does Lisbon compare with other school districts in the amount spent on the various items?"

Because of certain variations that are peculiar to individual districts, the New Prague survey attempts consideration in its analytical comparison only of certain expenditures per pupil that might be expected to be somewhat constant. Accordingly the following comparative tabulations do not account for the total current expenditures of any school district. In the case of Lisbon, they account for \$30,251 of the 1925-26 current expenditures of \$34,562. The difference between these amounts was spent as follows:

Fixed Charges as Insurance.....	\$ 580.00
Janitorial Service.....	1,920.00
Janitorial Supplies.....	388.00
Transportation of Pupils.....	892.00
Maintenance of Plant.....	495.00
Sundry Items.....	36.00

Total.....\$4,311.00

Instructional Costs and General Control

Sixty-seven and one-half per cent of the current expenditures in 1925-26 was spent on teachers' salaries. According to the New Prague Survey, "this represents a rather favorable allocation of the current budget." The median or average per cent expended for teachers' salaries in 142 Minnesota school systems having a population less than 2,500 was 54 in 1923-24. That the District is expending its budget efficiently is evident from the fact that it is devoting but 32 1/2 per cent of its total current expenditures to items other than teachers' salaries, whereas the average Minnesota community is making 46 per cent of its expenditures on the same items.

In the tabulations of the New Survey Instructional Costs and General Control are combined. Instructional Costs include teachers' salaries, textbooks, educational supplies and other sundry items. By General Control is meant the superintendent's salary and office expenses, the clerk's and treasurer's salaries and office expenses and other expenses of the board.

The following table gives the expenditures for General Control and Instruction and cost per pupil for these items:

School District*	General Control and Instruction	Cost per Pupil in Average Daily Attendance
Fertile	\$18,530	\$64
Harmony	20,309	76
Lake Crystal.....	17,980	62

Le Sueur.....	20,374	82
Long Prairie.....	37,733	89
Montgomery	18,269	82
New Prague.....	25,312	90
Osakis	27,043	77
Preston	29,103	83
Renville	28,791	73
Rush City.....	19,070	61
St. Charles.....	26,161	76
Stewartville	20,376	74
Lisbon	28,309	61

*Data presented to the nearest dollar.

From the above it will be seen that in comparison with other communities, the Lisbon schools are not overtaught; nor are the teachers overpaid for the cost per pupil of Instruction and General Control in the local schools is at the foot of the list.

On the other hand, as compared with the remuneration given by other communities, the Lisbon teachers are not unrepaid by this district. In a survey, made by Superintendent Engh of New Rockford, of the salaries paid in eighteen North Dakota cities of Lisbon's class, the local schedule is about the average.

Operation of School Plant

Dr. Engelhardt says: "Efficient school management implies that the buildings are operated at a minimum cost to keep the plant for the most effective use. This, in essence, means that janitors are efficient and understand how to keep buildings clean and in a proper sanitary condition. Fuel, light, power, and water must be economically and efficiently consumed. Rooms must maintain a normal working temperature." Mr. Eastman is assuredly to be commended upon the efficiency of his janitorial engineering. The figures that follow justify this merited praise.

This table sets forth the operation expenditures for certain selected items, and per-pupil cost of janitorial supplies in certain selected Minnesota school districts and Lisbon, North Dakota:

School District	Heat, Light, Power and Water (Three-year Average) Operating Expenditures	Cost per Pupil in Av. Daily Attendance	Janitorial Supplies per Pupil in Av. Daily Attendance
Fertile	\$1,449	\$5.01	\$0.44
Harmony	1,283	4.82	.70
Lake Crystal.....	1,369*	4.72*	.65
Le Sueur.....	1,130	4.54	.80
Long Prairie.....	2,774	6.54	1.73
Montgomery	2,092	9.38	1.15
New Prague.....	1,917*	6.82*	1.89
Osakis	2,528	7.16	.90
Preston	2,396	6.87	.70
Renville	3,231	8.24	.45
Rush City.....	1,780	5.71	1.01
St. Charles.....	2,141	6.19	.80
Stewartville	1,204	4.36	.67
Lisbon	2,195*	4.75*	.46

*Two-year average.

Dr. Engelhardt says: "The proportion of the total current expenditures allocated to operation is another index of a well-balanced budget." The average proportion of the annual current expenditures devoted to operation in 142 Minnesota school districts having a population of less than 2,500 is between 10 per cent

and 14 per cent. Last year the Lisbon school board spent 12.8 per cent of its total current expenditures on the operation of the plant.

Lisbon in Favorable Position

From the above analysis of school costs, it is evident that the Lisbon school district is operating the schools with an economy that should meet the approval of every taxpayer who wants good schools at a minimum of cost. That the district has reduced these costs to a minimum can be readily seen in the fact that current expenditures per Lisbon pupil are at the foot of the list.

MEASURING THE ABILITY OF POOR TOWNSHIPS TO SUPPORT SCHOOLS

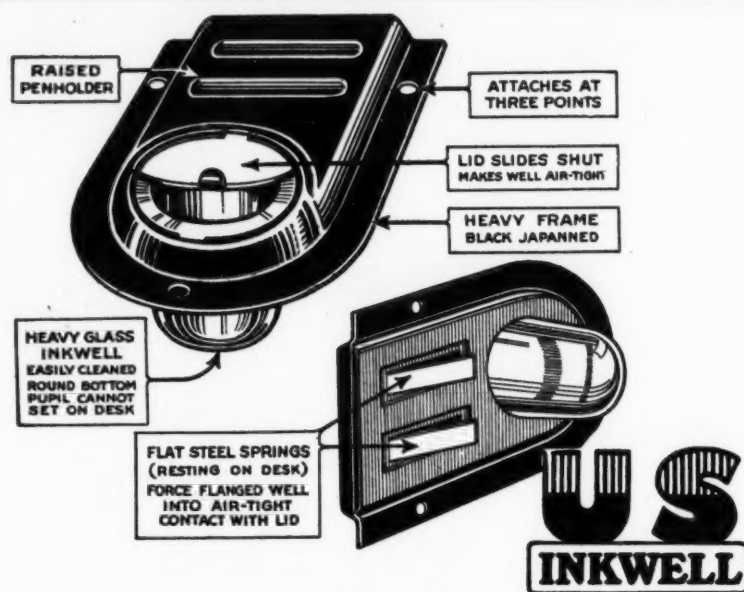
(Continued from Page 69)

economic situation. It would probably assure a better education for each child. Certainly a system of state aid should not be constructed to do the contrary. The present Indiana system has this unfortunate result. The same is true in a very large measure of even the most advanced plans being considered in other states.

The fundamental principles of state aid will have to be changed. We assume the theory that every child has a right to an education is so firmly established that it will not soon be questioned by any American State. The theory is correct—the defense is wrong. Assuming that the theory of the right to an education is accepted, it is now our duty to determine the bases for state aids that are sound from an economic point of view.

There is a fallacious argument that should not be confused with the above reasoning. Some will say "does not the same argument hold for the poor parts of a city?" Is there not danger of subsidizing people in the poor parts of a city and encouraging them to stay in positions other than the best from the economic standpoint? The argument is not the same. It may be that these poor people in the city could produce no more if in other cities or in other parts of the same city. By and large it is probably true.

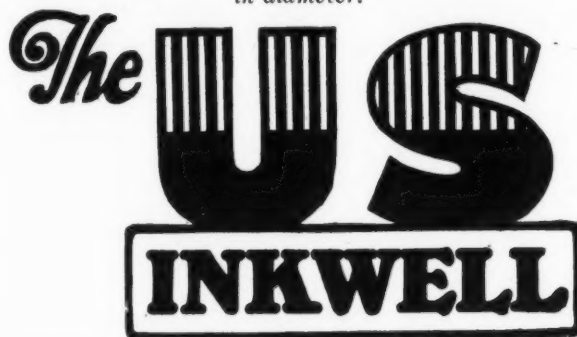
On the other hand the proof is very strong that the people of this township could produce



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The U. S. Inkwell is dustproof and noiseless. Teachers like it because it presents no time-wasting temptations to the pupil.

U. S. Inkwells can pass your most rigid examination. Check over the answers to these important questions:

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Yes, just drive in three tacks.
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Yes, its fits desks of any size. (Made in two sizes—Sr., Jr.)
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Yes, the lid does not rattle nor creak.
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Yes, because of low purchase cost and unusually long life.
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Yes, the tight fitting lid keeps out dust and prevents evaporation. Neither can the pupil tinker with it as easily as with the average desk well.

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more if they were in a different position. The very fact causes some of the people to leave, but the state steps in by a subsidy and acts as a check to this leaving. The total income of the state would be increased if the people left the township. And what is more important the children would get a better education. This latter fact is to be remembered; that the state by an unsound system of state aid is tending to keep children in communities whether they do not have as good facilities for education as they would if the state did not interfere.

New Principles of Giving Aid

The new principles of state aid should be based on three fundamental ideas.

1. That the so-called poor community should have returned to it what it has contributed. This would abolish most of the so-called aid which is not aid at all but simply returning to the community what has been produced in that community, and which, due to the tax system, has been collected somewhere else.

2. That communities which provide essential commodities or services be subsidized on this ground, if necessary, until an economic adjustment can be brought about that will pay enough for these essential commodities to enable the people to take care of themselves. This will not allow subsidies for such large classes as poor agricultural or poor mining communities.

3. That (excepted as stated under the two above) all state aid should be given in such a manner, that, while guaranteeing an education to each child, it will encourage the people of the state to live in or to move into the best economic position.

Needless to say, the principles and methods of state aid being discussed at this time, in the United States, violate these principles.

Conclusion and Summary

We would have the state frankly accept the duty of trying to correct economic maladjust-

ment instead of making the situation more or less endurable by subsidy. This suggestion will be called visionary by some. It is true it will demand much work, and in most cases, additional information that is not now available. This is especially true in regard to the income of the poorer communities.

In the long run this new procedure will be better for the state from an economic standpoint, and what is more important the children of the state will have an opportunity for better education.

The consensus of opinion recorded in the above tabulation may safely be accepted as representative. A larger number of replies would have made no substantial difference in the conclusions as is shown by the fact that the first one hundred replies and the second one hundred replies, tabulated separately, are in almost perfect agreement. The extent of agreement is expressed by a correlation of .98 where perfect agreement would have been represented by one.

It is evident, without a single exception, that school-board members are in almost unanimous agreement with the principles stated. The single exception is "the elimination of standing committees," and with this 72 per cent agree. Sixteen of the nineteen principles received the approval of over 95 per cent. The total vote of 256 board members upon the nineteen principles was distributed as follows: 4,617 votes of approval, 183 votes of disapproval, and 64 blanks. The total vote of disapproval represents the point of view of a very few individual board members, each of whom showed a disposition to disapprove a number of the principles. Although they constitute an insignificant minority, it is well to discover that there are, here and there, individual board members who conceive their function to be executive in nature rather than that of policy-forming. The vote of approval, which

represents more than 96 per cent of the total votes cast, may be taken as fairly conclusive evidence that individual school-board members recognize their function to be one of responsibility for policies and for the continued successful performance of the chief executive officer that they employ; and to whom they delegate executive authority commensurate with the responsibilities which they impose upon him. The conclusion, therefore, seems justified that the nineteen principles herein stated constitute a sound basis for the administrative conduct of the business generally entrusted to boards of education.

1890's Versus 1920's
(Continued from Page 68)

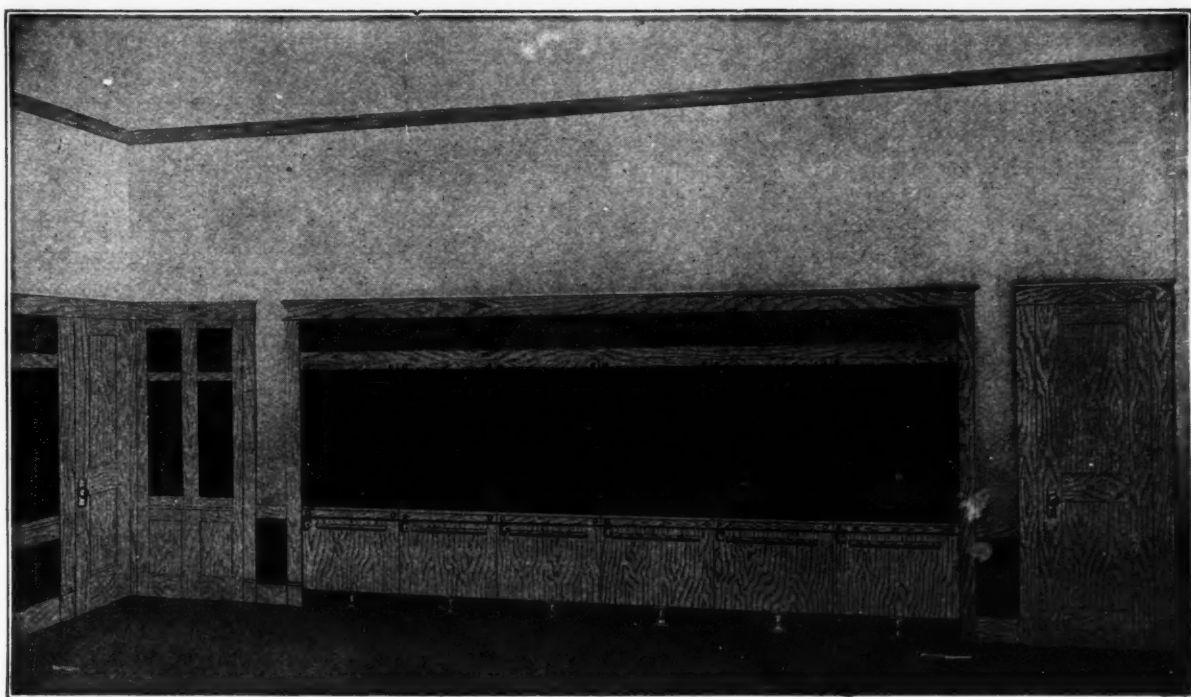
lated rooms have given way to rooms embodying ideal features. Architecture that was grotesque, ungainly, and inappropriate has been discarded for that which is suitable, artistic, and even esthetic in its appeal to students. Even the landscaping has become part of the scheme to make attractive what heretofore has been dead because of an attempt to be utterly practical.

Even without the contrasting wooden pile of a school with which to compare its beauty, the Sweetwater Union School is a joy to taxpayers, teachers, and students. Its arrangement of rooms, halls, laboratories, shops, and offices is ideal. Designed by T. C. Kistner, San Diego, California, a specialist in this type of architecture, the school building has stood the test of several years of use. Additions, provided for ahead of time, will accommodate this fast-growing section that is southernmost on the Pacific coast, the Mexican border being its southern limit.

"Colonial-Spanish" is the term applied to the style of architecture. Adobe-brown color is used in the stucco work, while red Spanish tiles adorn the roof. The two bell towers have flashing domes in triangles of blue, green, and

(Concluded on Page 146)

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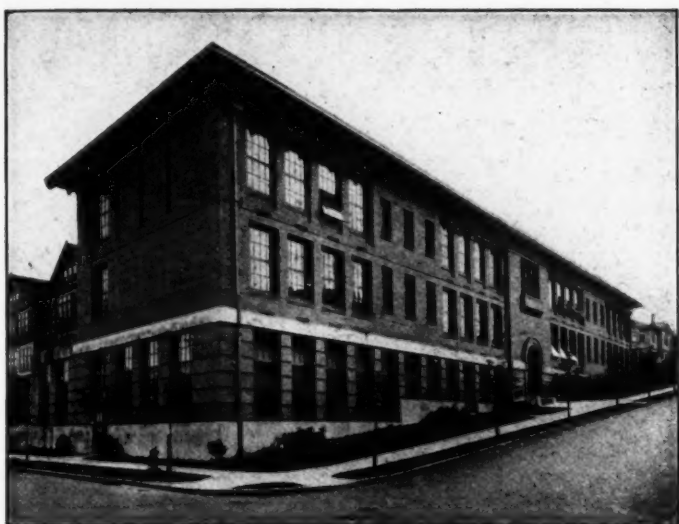
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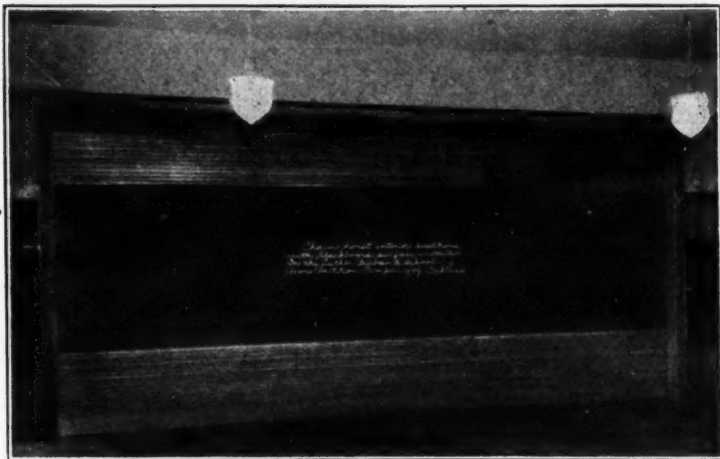
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The blackboard surface shown is applied directly to the smooth surface of the finished wood.

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(Concluded from Page 144)
yellow glazed tiles. There is a pleasing lack of ornamentation on the outside walls.

When the Sweetwater school board decided to build a school, they expected to grow. When the school was completed the district had 238 students, while the building was planned for an enrollment of 600 students. It was hoped that it would be adequate for five years, but in half that time the enrollment has reached 629! The original cost of the building was \$172,000. While there is almost one acre of floor space, the balance of the ground is not idle. A large playground, an athletic field, and a four-hole golf course for community use make use of the

remaining site, pending future building operations.

A practical arrangement for the parking of automobiles is followed at the Sweetwater school. In the immediate rear of the building is a parking space, for no automobiles may be left standing in front of the school. They come and go on the circular drive, but they must stand in the rear.

The equipment is modern and complete. One item of individual arrangement is worthy of note. A 6-in. strip of cork board is placed at the top of all recitation-room blackboards. Here are fastened with thumb tacks clippings, pictures, notes, and the like that are relevant to

the work in hand. Each student has his own locker set flush into the wall.

This modern school is a far cry from the South Bay Union School of the 90's. Methods of teaching have kept pace with school architecture. Or, rather, school architecture has improved due to the demands of modern methods of instruction.

CAFETERIAS: THEIR EQUIPMENT AND MANAGEMENT

(Continued from Page 55)

1925, all high schools in the city were placed on full time, and the regular high school day, from 8:30 a. m. to 3:00 p. m., with a half-hour lunch period, was established. This meant a complete reorganization of the lunchroom situa-

(Concluded on Page 149)



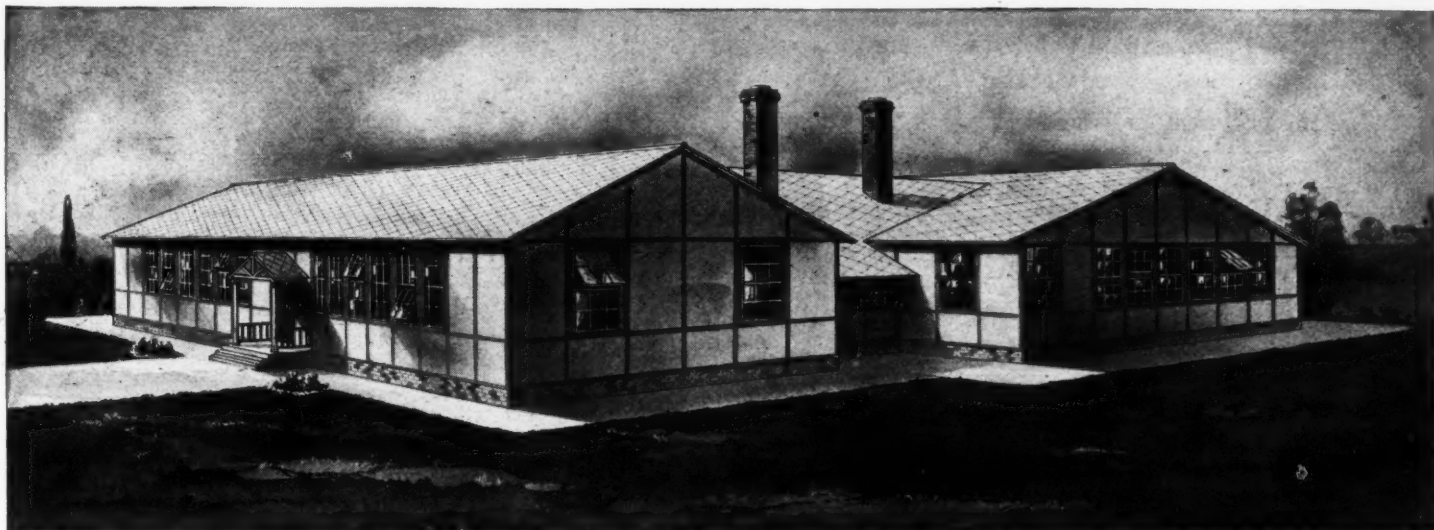
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“The Liberty” Fireproof Asbestos School

Safety to pupils by reducing fire hazard to a minimum. Fireproof Asbestos material is provided upon both the interior and exterior walls, and as well as upon the ceiling. The roof is also fireproof.

Superintendents, Principals, and Teachers will readily appreciate the fact that Fireproof Asbestos School Buildings are planned to insure the maximum in safety, comfort, and convenience, for both pupils and teachers.

Note carefully that the length and width of classrooms have been planned along the most scientific lines. Liberal aisle space simplifies the problem of supervised study and grants that freedom to pupils which is so necessary in health exercises. A false economy, detrimental to the welfare of the school and the functioning of the same, has been frequently experienced by making classrooms too narrow.

A well-lighted coatroom, under the direct supervision of the teacher, is a co-ordinate part of a modern classroom. Each room is so provided.

Ample storage space is provided for books and equipment.

The vestibule cuts wind-sweeps, offers additional protection to pupils, and automatically reduces the cost of heating.

The roof construction and special factors of safety employed in the buildings bear and are well worthy of special consideration.

The exterior design contributes materially to the aesthetic setting and harmonious balance of the school grounds landscaping.

The plans provide Legal seating capacity for forty (40) pupils and comply with the requirements of the School Law, which requires that there shall be provided 20% light area, 200 cubic feet air space, and 15 sq. ft. of floor area per pupil, and these “Liberty” Fireproof Asbestos School plans are approved as Permanent Buildings by the State Departments of Public Instruction of both Pennsylvania and New Jersey, and no doubt will be approved by adjoining States.

Provision is made for future additions.

Write for Plans and Specifications

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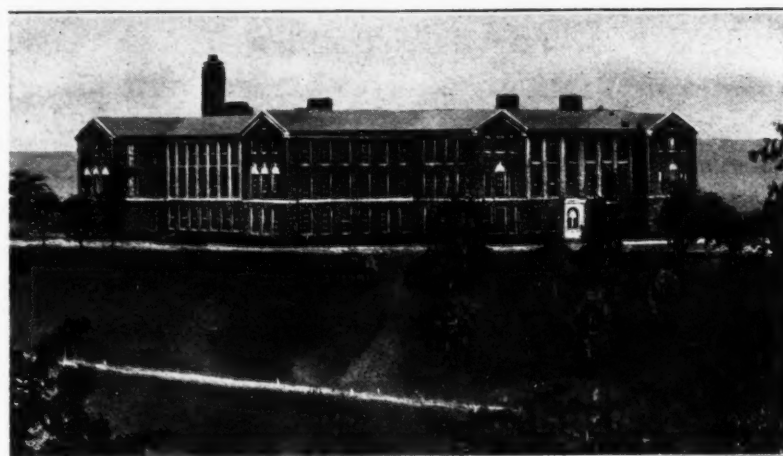
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MARIETTA HIGH SCHOOL, MARIETTA, OHIO. Garber & Woodward, Architects.
65,000 square feet of TMB in corridors and classrooms

Better Institutional and Business Floors at No Greater Cost

Hundreds of Schools, Offices, Churches, and Hospitals have found in TMB the answer to flooring problems.

At a cost no greater, and usually less than other types of approved flooring material TMB offers the unusual combination of extreme durability and delightful walking comfort.

Characteristics

The wear resisting quality of TMB is not confined to its surface but continues uniform throughout its entire thickness.

The smooth, velvety, rubbery surface of TMB will never wear gritty or become slippery.

TMB can be laid over wood or cement and once laid it will never buckle, warp, shrink, or become loose. To take into account the varying demands of foot traffic within an individual building, TMB may be specified in various thicknesses.

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Every TMB installation anywhere in the United States or Canada is made under the supervision of competent Moulding engineers.

Every floor is definitely guaranteed to give satisfactory service. Sixty-two years of experience, and strong financial responsibility, give the Moulding guarantee full significance.

Write today for detailed information. Outline your problem. Our fund of flooring information is available to you with no obligation.

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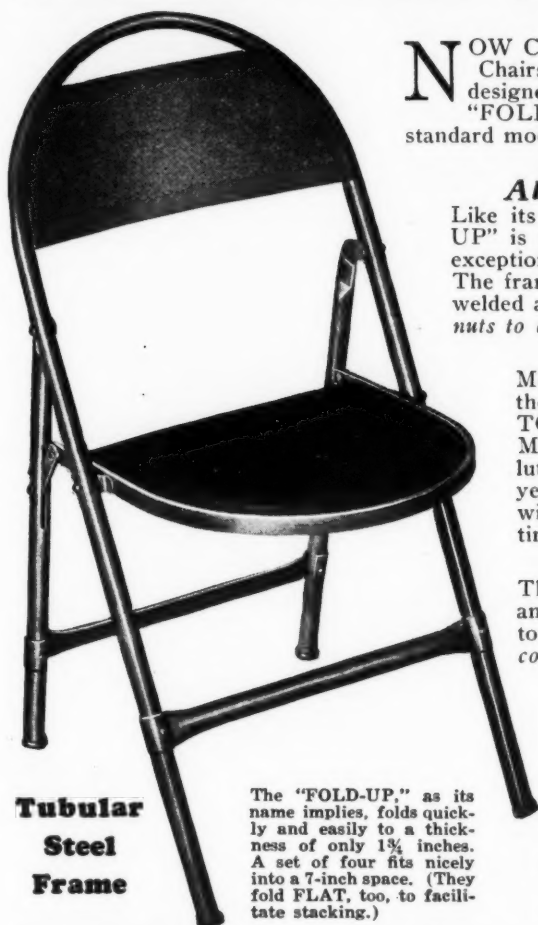
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**Tubular
Steel
Frame**

The "FOLD-UP," as its name implies, folds quickly and easily to a thickness of only 1 3/4 inches. A set of four fits nicely into a 7-inch space. (They fold FLAT, too, to facilitate stacking.)

NOW COMES the "FOLD-UP"—to share with Beacon Standard Model Folding Chairs a merited leadership in the field of auxiliary seating equipment. Although designed along different lines to make possible a lower price, the Beacon "FOLD-UP" retains those important qualities which have won for the Beacon standard model a nationwide recognition.

All-Steel Construction

Like its companion model, the "FOLD-UP" is made entirely of steel (with the exception of the seat and floor contacts). The frame is of tubular steel, electrically welded and riveted. There are no bolts or nuts to come loose.

No Sliding Parts

More important still is the fact that there are NO SLIDING PARTS TO GET OUT OF ALIGNMENT. The "FOLD-UP" is absolutely rigid and amazingly strong—yet it weighs only 7 3/4 pounds. It will carry a load more than 100 times its own weight.

For Proper Posture

The "FOLD-UP" has a back of ample proportions, correctly curved to induce proper posture. It makes comfort a fact instead of a promise.

Careful workmanship insures an absence of all rough spots which might damage clothing. Protection for carpets and polished floors is afforded by the

fibre floor contacts. (Leg tips of rubber, for added silence, may be had at slight extra cost.)

The "FOLD-UP" may be had in the same wide variety of frame colors and upholsterings as the standard model: Olive Green, Mahogany, Brown Walnut, Battleship Gray, etc.; with seats of Leatherette, Tapestry, Velour, or 3-Ply Weatherproof Veneer.

Perfectly Balanced

This illustration at the right, made from an actual unretouched photograph, suggests the sturdy construction and perfect balancing of the Beacon "FOLD-UP."

Send for Sample

Just fill in the coupon and pin it to your letterhead so that we can send you a sample Beacon "FOLD-UP" for comparison with others costing twice as much.



Beacon Steel Furniture Co.,
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Please send a new Beacon "FOLD-UP" on 10-day approval, subject to return for full credit if not entirely satisfactory.

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Seat:

Wood ☐ Upholstered ☐

BEACON STEEL FURNITURE CO.

1841-1845 Carroll Avenue :-: :-: Chicago

(Concluded from Page 146)

tion. The high-school principals requested the board of education to take over the control and supervision of all the lunchrooms. The board assumed the responsibility and assigned the writer to organize a workable plan. I was immediately faced with the situation that one school had all the latest and most modern equipment and two schools had very little that was adequate for preparing and serving the kind of lunches needed. Much new equipment was purchased by the board of education, but we still are in need of more equipment to equalize the service in the three schools.

The first year we ran each school as an independent unit so far as management was concerned, having a manager in each school, who had charge of the help, planned the menus and bought most of the foodstuffs. The writer handled the finances. The daily receipts were sent to my office, where they were checked, deposited in the bank, and checks drawn for bills and payrolls. A monthly report was prepared and sent to the superintendent of schools.

This plan was discarded at the end of the year as unsatisfactory, from the standpoint of uniformity of service, quality of food, and food costs. During the school year just closed we operated the lunchrooms with a manager in charge of all, and an assistant manager in each school. The yearly requirements for canned goods, paper goods, and general supplies were put out for bids, and contracts were entered into for milk, eggs, and butter. The saving has been most marked.

The Value of Good Food

It is interesting to note that the reaction of high-school freshmen to the lunches served reflects health habits acquired. Thus in our high schools there has been a steady gain in the number eating salads and selecting well-balanced meals and a large increase in the number drinking milk. In January, 1925, milk serv-

ices were started in eight of the elementary schools and this year we have nineteen schools with a morning milk service. The effect on the high-school lunchrooms of the habit of drinking milk has been as follows: In January, 1926, 14,723 one-half pint bottles were sold, or a daily average of 701 bottles. In January, 1927, 19,291 one-half pint bottles were sold, or a daily average of 823 bottles. In February, 1926, we sold 14,596 one-half pint bottles, or a daily average of 810 bottles. In February, 1927, our sales were 21,923 one-half pint bottles, or a daily average of 1,153 bottles. A gain of 330 bottles a day, due to the enrollment of freshmen. Cocoa and soup are stressed and large quantities are sold. Tea and coffee are sold only to teachers.

Some foods not approved as the right kind for growing girls and boys, are allowed occasionally on the menu. To meet repeated requests, frankfurters are served once a month. Pie is served once a week, but only custard, and occasionally a plain fruit pie; salted nuts are always on sale, but the only candy is milk chocolate, plain or with peanuts or almonds. One of the most popular dishes with the girls is mashed potatoes and gravy. In our largest high school one and one-half bushels of potatoes per day and several gallons of gravy are prepared to meet the demand for this item.

A large variety of food is served and the menus are changed from day to day. A large percentage of students bring at least part of their lunches from home, but all are required to eat in the lunchroom. Many buy milk, soup, or cocoa to eat with their sandwiches, and a dessert, usually ice cream.

We employ a large number of students during the service periods as cashiers, checkers, and assistants at the counters. When they work through two half-hour periods, as most of them do, they receive their lunches and fifty cents

per week.

Cash registers operated by student workers are used in each school. The assistant managers have charge of the daily receipts, checking the same and sending them to the director's office for deposit in the bank.

The Cafeteria in Social Activities

The high-school lunchroom should play its part in the social activities of the school by being ready at all times to provide refreshments for dances, suppers, and banquets. Careful thought is necessary in planning for dinners to keep the cost as low as possible and yet give satisfaction. The one problem we have found difficult in handling evening affairs has arisen from the fact that our lunchroom assistants are hired on the basis of an eight-hour day. When evening affairs are held, the cost of overtime for cooks and assistants has to be added to the cost of food, which in serving small numbers, makes the entire cost higher than for similar meals served at noon.

The Psychology of the Cafeteria

One more thing in closing needs to be stressed: It is not sufficient that the food shall be of good quality and well cooked, but that it must be attractively displayed. The manner in which food is arranged and placed on the counters affects the daily receipts. A dash of whipped cream or a maraschino cherry on a dessert will more quickly sell it, than if the same dessert is placed on the counter without any such decoration.

It is good sales psychology in the high-school lunchroom, to appeal to the eye by providing good surroundings, well-prepared food attractively displayed on immaculate counters, and presided over by assistants with winning smiles. Students must feel that they are welcome and that the persons who serve are friendly. With these features and a manager in charge who understands the purchasing of supplies, high-school lunchrooms cannot fail to be a success.

Scheduling Pupils in the Senior High School

J. D. Hull, Principal of the Senior High School, Springfield, Mo.

For many years high-school principals have agreed that the principal who fails to schedule pupils in the spring of the year impairs the efficiency of the school and accumulates worries to harass him during the vacation period. However, it has been the experience of the writer that even when early preparation is made for scheduling of pupils, the accurate and smoothly operating scheme is the exception rather than the rule. Too often pupils are scheduled hurriedly amid noise and confusion with no thought of the needs of the pupil's vocational or educational career. Or often all schedules are made out by the principal to the obvious neglect of his other duties. Following is the plan used in the senior high school of Springfield, Missouri.

Six weeks before the close of the semester each prospective 10B pupil is given a copy of the student's hand book of the senior high school. Senior-high-school pupils are already in possession of the hand book. This book contains, among other things, a detailed description of each course of study and a statement of the requirements for graduation in each curriculum.

Then for one week the entire homeroom period is given over to a study and discussion of requirements, electives, and the subject matter of various courses. Pupils are encouraged to discuss the matter with their parents and to bring parental queries as well as others before the homeroom adviser. At the close of the week, each pupil fills out a selection-of-studies-blank showing by subject the credits earned to date and by subject and semester of study the work which he plans to take for the coming semester. The pupil must have a signature of approval from one or both parents.

The fifth and fourth week preceding the close of the semester are used by the principal in making up the daily program for the coming semester. All selections are tabulated so that the number of groups and classes in each subject are rather accurately known. On the basis of intelligence quotients and teachers' estimates, the pupils are arranged in fast, medium, and slow groups. In English, science, and mathematics classes, speed grouping is done with a fair degree of success.

When the daily program has been completed, blue-print copies of it are made by the mechanical-drawing classes. These copies are distributed to the teachers. One copy of the program is made on a large rack which stands in the principal's office. The rack contains a pigeon hole for each class in the school. Above each pigeon hole is the name of the teacher of the class, the number of the room in which the class is to be held, the subject to be studied, the semester of study, and the rate of speed at which the class will work. Each teacher has all her classes in a vertical row of pigeonholes beneath her name. Horizontally, the first row is the first period of the day, the second row is the second period of the day, etc.

The last three weeks of the semester are used by the teachers in scheduling their homeroom pupils for the coming semester. Thus no teacher has more than thirty pupils to schedule and these may be scheduled leisurely, quietly and with no distractions. Of course the selection-of-studies-blank, approved by the parent serves as a basis for the scheduling. When a pupil is scheduled for a class, his name is written on a class card and this class card is placed in the pigeonhole which represents that class. When thirty class cards have been placed in one pigeonhole, the class is marked closed by the principal. Thus a fairly even distribution is secured. Two copies of each pupil's schedule

are made, one for the office and one for the pupil. The latter is handed to the pupil on the first day of the new semester by his homeroom teacher.

This plan has not been found infallible but it does have the following advantages:

1. The teacher load, rooms, and pupils' daily program are ready before the opening of school. Any of these may be changed during the summer if necessary. The class card for each pupil in each class acts as a pawn in the adjustment of conflicts.

2. Scheduling may be done quietly, leisurely, and scientifically.

3. Teachers may be selected to fit the subjects instead of selecting subjects to fit the teacher.

4. The daily program is presented to the teachers in a graphic fashion. They thus have opportunities to report early their questions, suggestions, and requests for changes.

THE BRYAN SCHOOL FOR CRIPPLED CHILDREN IN OKLAHOMA CITY

(Concluded from Page 48)

by an especially trained nurse. The apparatus was given to the school in memory of Mrs. Guy Templeton.

A lunch is served in the cafeteria each school day. Orthopedic doctors of the hospitals visit the school. Where private funds cannot be supplied for the correction of physical defects, another method of relief is afforded. In addition to the eight grades of schoolwork, occupational work is offered leading up to the learning of a trade.

Credit for the establishment of the school is due the mothers of these children. There were times when the project might have been abandoned but for the insistence of these mothers that their children be given an education. Much credit is due Mrs. Hattie Smith, the first principal, who showed Oklahoma City the possibili-

ties in education for crippled children. No doubt the establishment of the school led to the organization of the Oklahoma Society for Crippled Children, which came into existence in September, 1925, and which is doing a great work in aiding handicapped and afflicted children of the state.

The building was planned and erected under the supervision of Messrs. Layton, Hicks & Forsyth, architects, Oklahoma City, Okla.

THE ELM HEIGHTS GRADE-SCHOOL BUILDING

(Concluded from Page 66)

ash lift are provided for the convenience of the janitor.

The heating system is a vacuum-steam, direct-radiation system, with temperature regulation. Fresh air is supplied by means of window ventilation which is being used in this building for the first time in Indiana. Direct radiation is maintained by means of covered radiators under each of the windows, supplemented by a continuous steam pipe running the length of the room at the level of the window sills. Fresh air is admitted through window louvers, is passed over the steam pipes, and is tempered as it passes into the rooms. The foul air is removed through vent ducts and is carried through ventilators to the roof outlet.

The cost of the building, exclusive of equipment, was \$145,500, or 29½ cents per cubic foot, which is considerably less than the cost of this type of school building in the immediate vicinity.

The building was erected from plans prepared by Mr. Alfred Grindle, architect, Bloomington, Indiana, and the construction work was under the direction of Mr. Leslie Colvin and Mr. Roy Mobley, building contractors. Great credit for the especially fine building which has been erected is due to Mr. Ralph N. Tirey, superintendent of schools, who gave valuable assistance and advice to the architect in planning the several details of the building and its appointments.

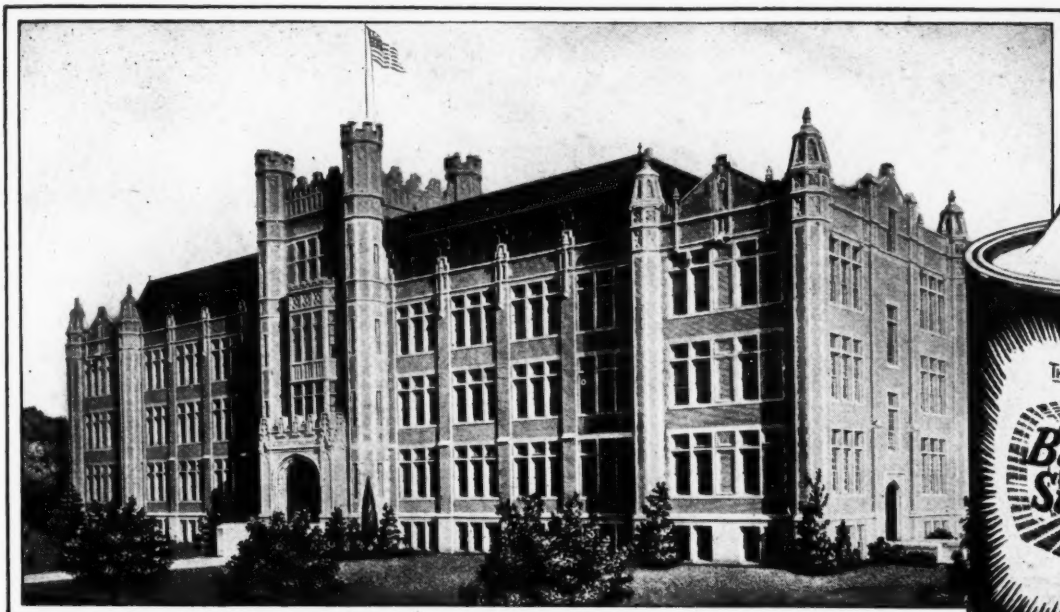


SCHOOLS AND MUSEUMS COOPERATE.

The joint committee on school-museum relations, appointed by the National Education Association and the American Association of Museums to make plans for better cooperation of schools and museums, has adopted recommendations governing the aims and procedure in carrying out this work. The recommendations have been adopted by the two associations engaged in the study and will be presented to the teachers of the country for final approval. It is the purpose to secure the appointment of local committees in each school district to promote an interest in visual education and to secure means for its development.

The committee is headed by Mr. Henry Turner Bailey of Cleveland, and comprises fourteen other members representing many of the important museums and historical societies of the country. It is especially desired that a representative of the schools be located in each city, this official to be given the duty of co-operating with the supervisors and teachers in selecting loan material for use in the schools. He would also be charged with the duty of assembling, caring for, and circulating of all material supplied by the museums in each locality.

The schools will be encouraged to make the best use of museum material to the fullest extent. The expense of providing the materials and keeping them in proper condition for traveling would be shared by the museums and the board of education upon a mutually satisfactory basis.



Over 2,000 gallons of Barreled Sunlight, white and tinted was used to paint the interior of this handsome building of the Woman's Institute of Domestic Arts and Sciences, Inc., at Scranton, Pa.



Lasting cleanliness and better light—when walls and wood-work are painted with lustrous, washable Barreled Sunlight!

This clean, handsome, durable finish for school interior use ~ in white or easily tinted

PAINTING school walls and wood-work with Barreled Sunlight is the modern way to insure lasting cleanliness and better light.

Three different finishes—all easily tinted—make this famous product available for every interior job.

Most practical for places that require maximum light and sanitary cleanliness is Barreled Sunlight Gloss. Its lustrous surface is so satin-smooth it washes like tile, and so durable that repeated washings will not injure it. Handsome as the finest enamel, it costs less and requires fewer coats.

Where less than a full gloss is required, the logical choice is Barreled Sunlight Semi-Gloss, an unusual combination of good looks and ease of maintenance.

And for the duller effect sometimes preferred on walls of well-lighted rooms, Barreled Sunlight Flat finish is ideal. This, too, is washable—though naturally

less durable under constant washing than the Gloss or Semi-Gloss.

BARRELED SUNLIGHT "covers" so well, and flows on so easily with brush or spray, that it does the complete job at the lowest cost per square foot of surface covered.

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PROMOTE BOTH
CLEANLINESS AND
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REQUIRE BUT A
MINIMUM OF
JANITOR SERVICE

**"The First Cost
is the Last Cost"**

Bradley Washfountains represent a great advance in modern washroom equipment. They promote both cleanliness and sanitation, are self cleaning and require but a minimum of janitor service.

And Bradley Washfountains are most economical. Their use reduces the number of fixtures required. They save floor space, use less water, and permit the use of fresh tempered water at all times.

For use in Schools, Colleges and Universities and in every type of public lavatories, there is no fixture equal to the Bradley Washfountain in utility, durability and beauty and in economy of operation and maintenance.

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Bradley Washfountain Co.
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The patented side-stream Century bubbler head is non-squirting and non-splashing even if the hand is placed over the water opening.

The pedestal is made of heavy cast iron finished in beautiful white porcelain enamel. Suitable for indoor or outdoor installation.

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Get full details about this and other popular Century drinking fountains for schools. The new Century catalogue will be sent upon request.

Century Brass Works, Inc.
318 N. Illinois St. Belleville, Ill.

SOME ASPECTS OF HEATING AND VENTILATING SCHOOL BUILDINGS

(Concluded from Page 42)

tific information, as soon as all interested parties can come to an agreement as to the interpretation of forthcoming results.

One can hardly pass by this subject without commenting on one or two recommendations made by the Joint Committee on Health Problems in Education of the N. E. A. and the American Medical Association. One is a resolution to the effect that the new systems or means makes possible the degree of temperature, amount of humidity, and amount of air movement desirable for schoolrooms. How that is actually accomplished, what the air movement is to be, where the moisture supply is to come from, how regulated, etc., is certainly not set forth, except that 30 cubic feet of air per child per minute is *not* required. How much more or less—no one has volunteered that information. The other recommendation is that in order to have this system work satisfactorily, this plan must be under the control of an intelligent, interested person (the teacher). Why the N. E. A. goes on record as favoring that a school teacher, among her many exacting duties, is also to act as keeper of a fresh air supply and heat director, is beyond comprehension, especially when all trends, including the recommendations of the N. E. A. itself, are in the direction of relieving the teacher of those duties which are not intimately tied up with the work of instruction. Surely we need much enlightenment.

But let us not forget that even this matter of dispute will probably bring forth results and investigations which will likely have a definite bearing upon future practice and standards. Such is progress.

The Essential Economy of Mechanical Plants

On the other hand it is to be admitted that mechanical systems are not perfect, but they can be controlled. It is possible to stimulate or produce nearly any condition set up and this with assurance, not only in schoolrooms, but in commercial establishments as well. Think for a moment of the exacting conditions required in three-color printing establishments and others. Of course all installations are not perfect, but it is like human nature to lambast the imperfect or poorly designed layout and give never a word of commendation to those jobs (the majority) which do function properly; no, not even an "honorable mention." Operation costs are relative. If the jobs produce the results to be desired in terms of air conditioning, healthful surroundings, and contentedness in environment, at an accepted standard of cost, then this is much cheaper than a job which does not produce these conditions, no matter how low the cost. Within reason it pays to spend money.

In conclusion I would like to reinforce what I have already stated directly and that which has been implied. It becomes necessary to educate the public to appreciate that providing heat alone for a schoolroom is not even a half measure; providing adequate sanitary conditions entails much more than heating.

We recognize the necessity of ventilating chicken coops and cow barns, but we certainly are not so sure about schoolrooms, otherwise why the lack of air supply so frequently found? In an all-blast system we perforce ventilate some even if we recirculate one hundred per cent of the air; in a split system it is quite different.

It is necessary to educate the public to the fact that any system may really become inoperative or even a direct menace to health if

control is lacking. But here again it is surprising to find controls quite frequently not used, especially the ones which control those conditions which are not directly responsible for heating, such as air washers, humidifiers, filters, etc. To close down that part of a plant which is essential to producing proper air conditions, in order to save a few dollars—if a real saving there is—seems indefensible. If the equipment was worth installing in the first place, it is worth operating.

And lastly, a word about those which constitute the greatest number of school officials, the school-board members of the smaller cities and the rural districts. Their problems are real ones and much closer to home than most of ours. In many, many instances very rigid economy must be practiced both in capital outlay and in operation expenses. Especially vital are the heating and ventilating problems and lack of appreciation in this respect is much more in evidence with these people than it is with those in charge of larger plants or cities. High-class engineering service is many times out of the question and you will be surprised how many "cross-roads experts" mess around with a heating and ventilating job. It is a real problem how to convince many people of the merits of the case and secure adequate expert advice. Queer as it may seem, the latter is quite frequently neither sought nor heeded, even if given gratis. Here the most intensive educational campaign in the direction of giving the boys and girls of these schools a square deal, must be waged.

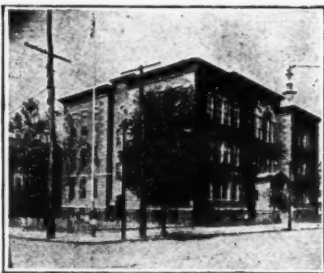
—School trustees in Greenville county, S. C., 300 in number, are organized and hold monthly meetings. Programs are carefully planned, and the performance of the duties of trustees and the best methods of administering school affairs are discussed. Effective work has been done and helpful policies have been formulated.

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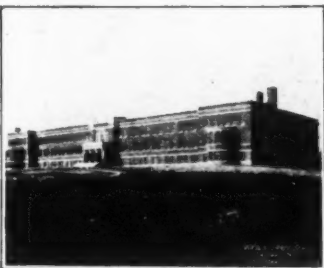
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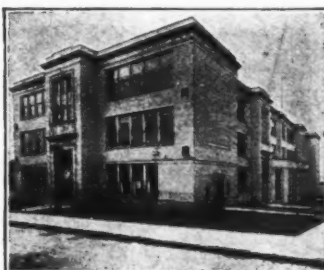
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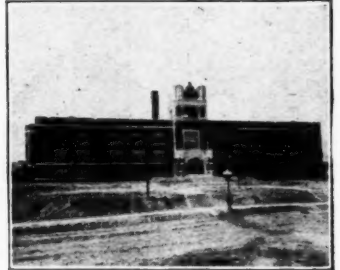
Wear Resisting!

HAAS Water Closets and Haas Flush Valves are notable for their long and trouble-free life. They have no metal-to-metal contacts to give rise to rapid wear.

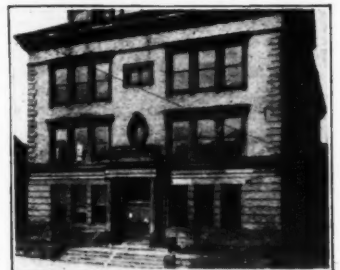
The elimination of all complicated mechanism, needle-point adjustments, and small ports that might clog, makes them dependable year after year. Other important features are their instant flow-adjustment and positive control of after-fill.

Haas Flush Valves are internally self-cleansing in all waters—even alkaline and sedimental waters.

Guaranteed five years, many Haas installations are in daily use after more than 30 years of public service. They are the logical equipment for YOUR school!



JEFFERSON SCHOOL
DAYTON OHIO.



C.M. SCHWAB INDUSTRIAL SCHOOL
HOMESTEAD, PA.

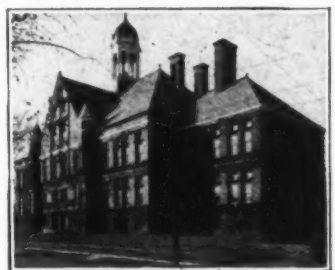
WATER CLOSETS HAAS



*Catalogue gladly sent upon
request to school board
officials and architects.*



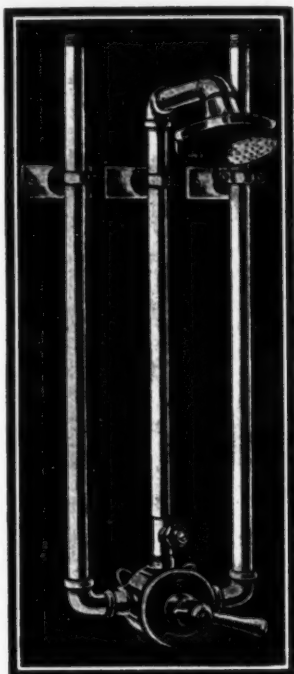
WILKINSBURG HIGH SCHOOL
WILKINSBURG, PA.



CHERRY AVE. SCHOOL
CANTON, OHIO.

PHILIP HAAS COMPANY
DAYTON, OHIO

Established 1896



NIEDECKEN SHOWERS

PATENTED

An Economy Shower for School Installation

Consisting of NIEDECKEN MIXER which can be set to a fixed maximum temperature, preventing waste of hot water; shower head, *Lock Shield Flow Control* and pipe supports. Piping is furnished by erecting plumber and can be finished with white enamel paint or aluminum bronze.

The Price is \$17.35. No Piping Included.

Write for Bulletin S. B. 15X.

HOFFMANN & BILLINGS MFG. CO.
MANUFACTURERS SINCE 1858.
MILWAUKEE, U. S. A.

Fool Proof



Patented

Vertical Bubbler
Regular
Angle Bubbler
on order

Schoolyard service requires the unbreakable Murdock Outdoor Bubble Font.

Solid Bronze Bowl and Bubbler.

All brass supply pipe, valve and inner works. Nothing to corrode.

Heavy cast iron pedestal.

No cock to get out of order. The valve is pedal acting.

Self-draining. Every drink is fresh.

Children cannot squirt with it.

Anti-freezing.

All working parts are completely enclosed and out of harm's way yet readily accessible. No digging up.

Also Indoor Drinking Fixtures for Schools.

Write for handsome booklet "What To Know About Outdoor Drinking Fountains."

THE MURDOCK MFG. & SUPPLY CO.

Cincinnati, Ohio

Makers of Outdoor Water Devices since 1853

A SUCCESSFUL FINANCIAL SCHEME

(Concluded from Page 50)

Total receipts for the year from the sources mentioned amounted to \$19,208.42, and total expenses amounted to \$6,560.02, which covers labor, upkeep, repairs, and replacements. Labor, such as lifeguard duties, ticket charge, janitor service, etc., are done almost entirely by school people, which gives them a close contact with and a vital interest in the building and its activities. Also much of the equipment for the entire construction has been made by the manual-training department at a minimum cost.

A swimming instructor is employed by the school board. The tank is open until 9 P. M. to the general public, and after that to private parties and organizations. The summer schedule provides for two mornings a week with the instructor who teaches individuals or groups, and afternoons and evenings run the same as during the school year. In the short time the building has existed an amazing amount of interest has been created in swimming and water sports, both in the community and the schools, and some of the students have made admirable showings in water contests in their own and other cities.

On the board of control for the building are the student-body presidents of the junior and senior high schools, the principals of all the buildings in the city, and the members of the school board, thus making a fair and balanced representation, and effecting a stronger unit.

The natatorium-gymnasium is more than a building. In so short a time it has become an institution, a very definite part of the center in which it is located. In achieving it, Mr. Miller has given to Aberdeen as a community a valuable social unit, and Aberdeen as a community realizes it, which is strongly evidenced

by the support given. He has more closely knitted together school and community, thus giving breadth of scope to both, and bringing about a greater degree of interest and understanding, a most valuable achievement in itself.

To youth he has given another means of clean, wholesome, and constructive sport, a thing which all civilization recognizes as of tremendous importance today. To restless adolescence he has given another means of physical development. He has given to pupils the privilege of sharing a big responsibility, of enjoying the romance of business, of the wholesome influence of management, of feeling a vital part of some living thing, a privilege which they like, and to which they respond eagerly and with surprising aptness.

He has pleasingly and wisely combined education, play, work. He has provided Aberdeen and community with a very definite constructive means of providing for the welfare of its children. In these particulars alone, the building has paid for itself times over, and will continue to do so.

Without the vision of one man; without his faith and confidence in the idea, in the people with whom he was dealing, in the community; without his enthusiasm, his sincerity, and untiring labor at all times, it could not have been achieved. Rightly it has been named the George B. Miller Natatorium.

A SUCCESSFUL TEACHERS' ORGANIZATION IN A SMALL SYSTEM

(Continued from Page 52)

rule has been put into effect that high-school teachers must visit the parents of all failing pupils, and teachers below high school must visit all parents. The specimen program on page 52 attempts to prepare the teachers for this

undertaking by shifting their point of view directly about, making them see the school from the outside. On other programs there have been placed prominent people of the community, both men and women, who have emphasized phases of local activity, and the school's relation to them. If talks dealing with the teaching business are introduced, routine and technical subjects are strictly taboo; the address must deal, for instance, with problems of personality, or with the philosophical, social and cultural aspects of the profession. Technical topics are reserved for the smaller group meetings in connection with the general meetings and, more especially, those held by principals in their own buildings.

The group meetings on the program here detailed have the advantage of allowing all teachers doing the same kind of work the system over to get together. Long periods for study in this connection have not proved successful; the groups are too large, and interest cannot be sufficiently concentrated. A short period is devoted to reports of visits, announcements, and perhaps to a little discussion of some professional study, under the leadership of supervisors and principals.

Next, there is the "stunt"—some form of farce, music, reading, pantomime, or what not, put on directly by the teachers from the building, or provided by them. The original thing is, of course, the popular thing, if well done, but the qualification of excellence is important, else it "falls flat." It is easy, nevertheless, to call upon children's groups, competent performers from the community, visitors, and so on.

Finally come refreshments. Group teachers together about plates and cups, and the attitude of the sternest martinet or the most professional pedagogue must soften. He may learn more about human relationships in a few minutes

(Concluded on Page 157)



Here is a
Toilet Tissue
 That Gives
Real Satisfaction
 Always

NO-WASTE toilet tissue is favored by institutions and large users because it is reliable, uniform, sanitary under the most exacting tests and, because made in large quantities, is reasonably priced.

Large buyers of toilet tissue will be well rewarded if they thoroughly investigate NO-WASTE before making contracts.

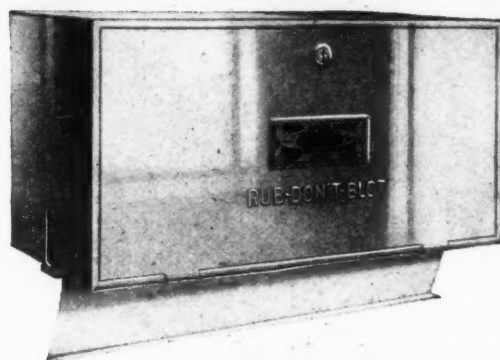
The cabinets provided for dispensing NO-WASTE toilet tissue are of the simplest possible construction, having no wheels, springs or other mechanism to get out of order. The tissue is drawn from them two sheets at a time, the slight resistance involved preventing needless and wasteful withdrawal. The soft, absorbent character of the tissue, and the automatic economy necessitated by the cabinet, effect savings.



NO-WASTE TOILET TISSUE

Distributed by leading wholesalers in all principal cities. Details and name of nearest distributor will be mailed on request.

National Paper Products Company
 CARTHAGE, N. Y.



This Cabinet Dispenses
"PUBLIC SERVICE"
PAPER TOWELS
Economically—One Towel at a Time

SO simple in construction that it cannot get out of order.

One hundred and fifty towels are locked in the cabinet and are pulled out one at a time until the cabinet is empty.

PUBLIC SERVICE paper towels are made with a patented hem [lower edge folded over] that keeps wet fingers from tearing them.

They are made of purest selected wood pulp and pass every scientific sanitary test.

Present users of cloth towels should consider the economical possibilities of paper towels. Those already using paper towels will be well rewarded if they investigate PUBLIC SERVICE paper towels before placing contracts.

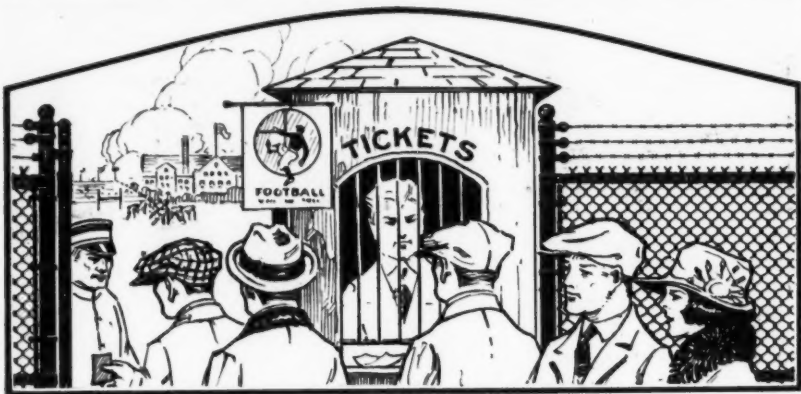
Full information, including samples of cabinets and towels, and address of your nearest supplier, will be gladly sent on request

National Paper Products Company
 CARTHAGE, N. Y.



*Public Service
 paper towels
 bring a
 smile of
 satisfaction
 to the face
 of the user*

Public Service PAPER TOWELS



Doubles Your Revenue From Athletic Events

A Cyclone Fence enclosure is a highly profitable investment wherever admission is charged for athletic events. Everybody passes through fixed entrances—everybody expects to pay the established price.

Crowds enter and leave fenced athletic fields in an orderly manner. When the public is not invited, Cyclone Fence bars intruders, makes supervision easy, enforces respect for school property. Protects the grounds, reduces maintenance expense.

Cyclone Chain Link Fence is America's standard for athletic fields, playgrounds, and all school property. Erected complete by trained crews in the direct employ of the Cyclone Fence Company. We erect fence anywhere.



Cyclone Chain Link Fence for athletic fields. Fabric, tubular steel posts, and framework, all copper-bearing materials.

We also manufacture Wrought Iron Fence.

CYCLONE FENCE COMPANY

Main Offices: Waukegan, Ill.,

WORKS AND OFFICES:
North Chicago, Ill., Cleveland, Ohio,
Newark, N. J., Fort Worth, Texas.

Direct Factory Branches in
All Principal Cities

PACIFIC COAST DISTRIBUTORS:
Standard Fence Co., Oakland, Calif.
Northwest Fence & Wire Works,
Portland, Ore.



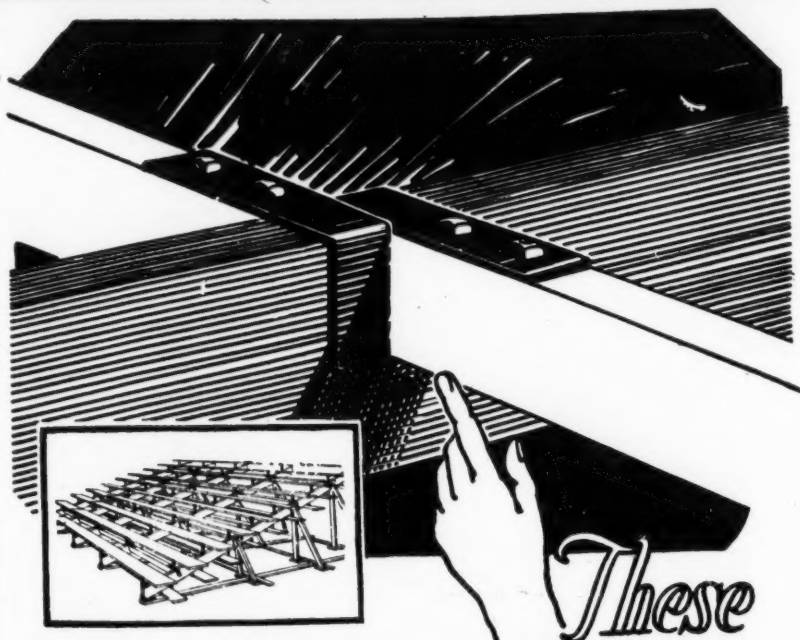
The Mark of Dependable Property Protection

Cyclone Fence

Reg. U. S. Pat. Off.

The only chain link fence made entirely of copper-bearing materials—for maximum endurance

© C. F. Co. 1927



These Yellow Orange Stringer Ties Insure Safety

{ In the terms of the Building Code, Knockdown Bleachers have a Safety Factor of four or more }

When seething, swaying crowds pack every inch of available space on Knockdown Bleachers—there is no danger.

If by magic, these crowds could be doubled and tripled in the same space, your bleachers would still have an ample margin of protection.

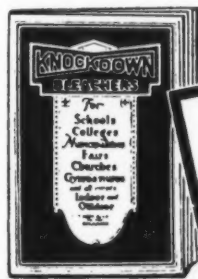
You can thank the golden yellow stringer ties for this to a large degree.

They are patented. They prevent side sway and end thrust, and they are extremely simple.

A minutes study of the engineering plan as well as the combined evidence of hundreds of users will convince you of this.

May we send a booklet with full information.

There is no obligation in sending for this booklet, which contains full data and information on Knockdown Bleachers.



LEAVITT MFG. CO
Dept. S-8
Urbana, Illinois

Please send me without obligation a copy of the Knockdown Bleacher Book.

Name _____

Address _____

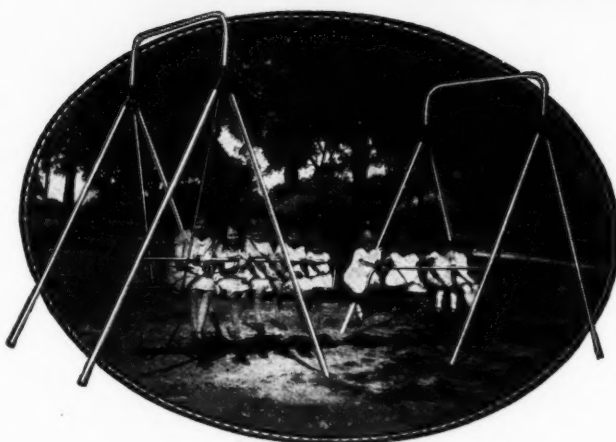
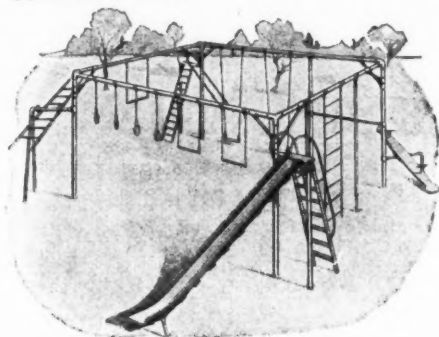
MITCHELL

PLAYGROUND

School Combination No. 1430

THE School Combination combines all the features of a large playground and will accommodate a large number of children at one time. For those who desire various types of equipment affording a variety of physical exercises and cannot make the outlay necessary to purchase separate outfits, this combination is ideal.

There is equipment in this outfit for children of all ages and also adults. Its compactness allows plenty of space for ball games and other exercises requiring open space. We believe that this is the finest combination available at any price. It occupies a ground space of approximately 40 by 40 feet and stands 12 feet high. All metal parts heavily galvanized. Study carefully the illustration and specifications herewith and note the extremely reasonable price considering the quality and quantity of apparatus offered.



SWING-BOB No. 600

THE SWING-BOB IS AN IDEAL DEVICE for School Playgrounds. It accommodates about 16 children at one time and it is safe in every way.

Send for Complete Catalogue

MITCHELL MFG. CO.

1801 Forest Home Ave.

MILWAUKEE, WIS.

St. Paul

Cleveland

Wichita

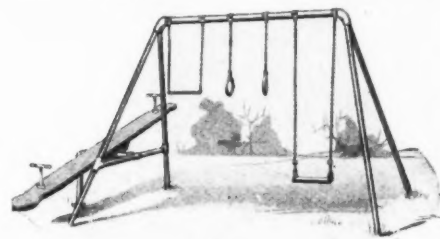
EQUIPMENT

Combination No. 1210

ALTHOUGH this outfit was primarily designed for home use, it is by no means limited to this but is a very appropriate outfit for the small children's section of a large playground.

The Combination consists of our improved Teeter Board, Swing, Trapeze, and Flying Rings. The Frame is constructed of galvanized steel pipe with galvanized malleable iron fittings. Galvanized steel chain used throughout. Swing seat and Teeter Board are of selected wood. Rings are rust-proof, solid cast aluminum.

The Mitchell Combination stands eight feet high and occupies a ground space of approximately twelve by twenty-two feet. All parts are heavily galvanized.



than he will in many hours' work on a perfectly good test in arithmetic or geography. Refreshments at a teachers' meeting? Assuredly.

The parenthetical adjuration at the end of the program needs but a sentence of explanation. Teachers in any grade or department who believe they have devices and materials worth the attention of others are encouraged to place these on display in their rooms.

One of the compensations for work in a small system is the privilege of personal acquaintance, social intercourse, and exchange of ideas among the whole teaching force. In many instances, this phase of personal development, resulting in a happier, more initiative working group is overlooked. It should not be.

A SOUTHERN HIGH SCHOOL OF DISTINCTION

(Continued from Page 59)

torium is so arranged that the fixed seats in the auditorium and gallery take care of the school enrollment. The central portion with the flat floor is arranged for gymnasium purposes and is equipped with folding seats which may be removed and stored when not needed. At the rear of the auditorium is a stage fitted with four sets of scenery; the scenery may easily be removed, making the stage space available as a speaking platform. Two staircases lead from the rear of the auditorium down to the first floor, and back of the staircases are the dressing rooms.

On the third floor of this building the corridors connect with those of the academic building by a covered passageway. To the left of these corridors are placed the chemical laboratories, the lecture rooms, and the various closets. Between the corridors and in the center of the court are the general science laboratories with the lecture room.

On the right of the corridors is the home economics department comprising the kitchen, the laboratory, the sewing, millinery, and fitting rooms, and the homemaking suite. To the rear of the home-economics department is the upper portion of the auditorium, which is given over to the gallery seating 854 persons. The gallery leads to the two stairways in the rear, making ample provision for exits. Adjoining the gallery is a large room for a motion-picture booth, while upon the stage is found a permanent screen of white plaster.

The Exterior Features

The exterior of the building is in the classic style of architecture with a colonnade in the center. The whole exterior treatment is of Bedford limestone, making a pleasing appearance and lending dignity and endurance to the structure. The corridors throughout the building are all floored with terrazzo, with solid borders and base extending 6 in. high. Above this the corridors, staircases, and gymnasium are wainscoted with an enameled brick, making them sanitary in every respect.

The plumbing equipment for the building is of the most modern type. All partitions and wainscots, as well as the floors of toilet rooms, lockers, and bathrooms are of Tennessee marble. The window frames and sash are of high-grade red cypress. The floors in the classrooms are of clear, edge-grain yellow-pine, and the interior trim is of a good quality quarter-sawn white oak, varnished and rubbed to a smooth finish. Wood floors throughout the building are sanded and treated with oil, with the exception of the home-economics department, the offices, and the stage, which have been finished, varnished, and waxed.

The Equipment

A description of this building would not be complete without a word about the equipment.

The administrative offices, as well as the smaller offices in the academic and science buildings are equipped with flat-top office desks, typewriter desks, office and tablet-arm chairs, letter trays, files, and cabinets constructed of the quarter-sawn white oak, finished in harmony with the millwork and other equipment in the building. The classrooms are equipped with 30 tablet-arm chairs, a teachers' desk and chair, a bookcase, and a slate blackboard with cork bulletin board. The special rooms have equipment to suit their particular needs. The auditorium is seated with 2,554 opera chairs, while the gymnasium section is provided with 1,000 folding chairs. The gymnasium is equipped for community recreation purposes and for indoor basketball. The stage has all the necessary equipment of an ordinary theater, including a speaker's stand and amplifier. The cafeteria is equipped with 69 maple tables and 34 dozen chairs to match. The kitchen utensils and cutlery include aluminum ware, stainless steel cutlery, pyrex ware, and Wellerware. In addition, eight gas ranges have been installed in the household-arts department, as well as one enameled range, with a heat regulator. The china, glass and silverware are of the best quality of hotel and restaurant type. The kitchen is equipped with a gas range of sufficient capacity, a dishwashing machine, potato peeler, dough mixer, refrigerator, slicer, baker, and other necessary equipment. A total of 1,900 steel lockers have been installed in special locker rooms, corridors, and teamrooms. A program-clock system has been installed with a secondary clock in each classroom and in the auditorium.

The building was erected from plans prepared by Messrs. Favrot & Livaudais, architects, of New Orleans, and the construction work was in charge of Caldwell Brothers, general con-



What if fire strikes THIS year?

Each year some children somewhere lose their lives in school-house fires.

The law of average still works. Will your children be the next?

Let us tell you about the Logan Spiral Slide—the fastest, safest fire escape yet devised. Write now!

Logan Firescapes



LOGAN CO., Incorporated
(Formerly The Dow Co.)
300 North Buchanan Street
LOUISVILLE, KENTUCKY



tractors, of New Orleans. The structure was erected at a cost of \$1,250,000.

Mr. S. M. Brame is principal of the high school and Mr. W. J. Avery is superintendent of the Rapides Parish schools.

THE ASBURY PARK JUNIOR-SENIOR HIGH SCHOOL

(Continued from Page 62)

dressings rooms and 600 box lockers. Adjoining the locker room on the north are the girls' shower rooms, toilets, and the exit to the athletic field. On the south there is a bicycle room 20 by 40 ft., with an easy ramp leading to the room from the grade level.

The Cafeteria

The cafeteria, which is on the top of the fourth floor of the main building, is well lighted and overlooks the lake. It is 34 by 104 ft. in size, accommodates 300 persons at one sitting, and is arranged in such a way that extensions may be made at any future time. A faculty room adjoins the cafeteria. The kitchen which adjoins the cafeteria is complete with all modern appliances and machinery, including electric ranges, bake ovens, mixers, soup kettles, potato peelers, and dishwashing machines. An automatic elevator has been installed for the convenience of the cafeteria employees and staff in receiving and distributing food supplies.

Special Rooms

All special rooms, including the library, type-writing rooms, bookkeeping room, fire-arts room, science rooms, laboratories, and domestic-science and art rooms, are equipped with all modern conveniences for the teaching of these subjects. Two study rooms on the second floor may be converted into one large room 24 by 64 ft. by simply opening the folding doors. The three study halls on the third floor may be similarly

converted into one large lecture room 22 by 78 ft.

The Heating and Ventilating System

The heating plant is located in a side wing of the building adjoining the corridor of the gymnasium, and is fireproof throughout. Five steam boilers supply the heat. Four of these boilers are of the 79-in. water-tube type, guaranteed to distribute 15,000 square feet of radiation, and the fifth is cast-iron and is used for heating the offices when the main plant is not in operation and for heating water. Each boiler is provided with an enameled steel jacket; the chimney is a radial brick stack. A vapor steam system of heating is used. Cast-iron radiators are located under the windows in each room which heat independently of the mechanical air supply. The cafeteria and kitchen section have an independent exhaust system, with belt-driven exhaust fan, which takes the air from the cafeteria into the kitchen, from which it is exhausted by means of ducts connected with the fan. Thermostatic temperature control is used for all radiation. Air is supplied to the various rooms by two multivane fans and is exhausted by two fans of similar type. The supply fans are equipped with remote controls connected with the engineer's room, which are used for starting or stopping, or for varying the fan speeds in the delivery of air to the several rooms. A roof vent fan exhausts the air from the class and special rooms. The air is heated by passing through cast-iron radiation which is automatically controlled.

The Cost of Construction

The cost of the construction, exclusive of equipment, was \$808,000, based on a cubage of 1,600,000 cu. ft. The cost per cubic foot was fifty cents and the cost per pupil was \$789. The cost for general construction was \$671,000; for heating and ventilation, \$83,000; for plumb-

ing, \$33,000, and for electrical work, \$21,000. The total cost of the structure, including equipment, fees, grading, driveways, and walks, amounted to \$1,000,000.

The building was erected from plans prepared by E. A. Arend, architect, Asbury Park, assisted by Guilbert & Betelle, consulting architects of Newark, and the construction work was done by Sprague & Slocum, engineers of New York City.

AN ECONOMICAL FIREPROOF SCHOOLHOUSE

(Continued from Page 64)

All wardrobes are of the Chicago type and have separate vents at top.

The ground floor contains the kindergarten rooms, each of which are equal in area to two classrooms. These rooms are equipped in the usual manner. The walls are decorated with nursery rhymes.

On the same floor there are two rooms—one for boys and one for girls—for milk and lunch distribution; also playrooms and general toilet rooms, the combination assembly hall and gymnasium.

The boiler room adjoins the main building at rear. Underground coal pockets are provided.

The first floor contains ten classrooms, the principal's office and supply room, a teacher's room with kitchenette and toilet, also emergency toilets for boys and girls.

The second floor contains eleven classrooms, one large classroom measuring 22 ft. 6 in. by 44 ft., one classroom with windows on all three sides for open-air classes, and emergency toilets.

A dental clinic and nurses' room are also provided. These rooms have tiled walls and floors, are fitted complete with outfits, cabinets, files, optical apparatus, first-aid kits, etc.

(Concluded on Page 160)

YOUNG

CENTRIFUGAL VACUUM
AND BOILER FEED



Supplied in
Standard
Units of Seven
Capacities

PUMPS

To Cut Costs in Vacuum Heating

YOUNG Vacuum Pumps reduce fuel costs by permitting of a reduction in boiler pressure. This is accomplished by their ability to permit the operation of the heating system on higher vacuums than usually are maintained in school heating, and by keeping the return piping and radiators free from air and water, two elements which interfere with successful distribution of steam throughout the system. Fuel is saved when Young Pumps are installed because less coal need be burned to provide the desired amount of heat in every nook and corner of the building.

Shipped as a completely assembled and tested unit, ready to run when feed wiring is connected.

YOUNG Pump Company

DUNHAM BUILDING
450 East Ohio Street, Chicago

Factory: Michigan City, Indiana
In Canada: C. A. Dunham Co., Ltd.,
1523-41 Davenport Road, Toronto.

You should give them this greater cleanliness they need ~ ~ ~



Summer Vacation is the Time to Use a FINNELL

During the summer your janitor can completely renew the finish of every floor in the building, without the aid of expert help. For the FINNELL is as easy to operate as a vacuum sweeper. Think of the saving—and the greater cleanliness that will greet the youngsters next term!

THEIR mothers look to you for cooperation. At home every effort is made to feed them clean food, provide them with clean clothing, clean beds, clean homes. Do you take up the good work at this point and provide a clean school building?

Consider the floors, for example; for clean floors are really the basis of a school building's cleanliness. If a small floor space, of any material, were scrubbed with a FINNELL Electric Floor Machine, and compared with the remaining area, you would be astounded at the contrast. For no matter how hard they work, the cleaners can never scrub so thoroughly, so speedily as the FINNELL. Not only does the latter give cleaner floors, but it actually saves time and labor that soon reimburse you for its entire cost and upkeep.

Preserve, Beautify, Any Type of Floor

With powerful brushes, driven by a practically noiseless motor, the FINNELL puts new life into terrazzo, mosaic, rubber, cork, tile, wood. By removing dirt and incrustations it prevents decomposition. It also waxes and polishes wood or linoleum floors, imparting a soft luster that increases their attractiveness as well as prolongs their life. All at an operating cost of less than three cents per hour!

There are eight FINNELL models made to suit the needs of every school building, large or small—PROFITABLY!



FINNELL

ELECTRIC FLOOR MACHINE
It waxes • It polishes • It scrubs

Send for free booklet

Explains efficient, economical floor maintenance. Write for it today. If you wish our engineering department to furnish without cost an estimate of equipment needed and possible saving, enclose description of floors, area, present maintenance cost. FINNELL SYSTEM, INC., 68 East St., Elkhart, Ind. (District Offices in Principal Cities).

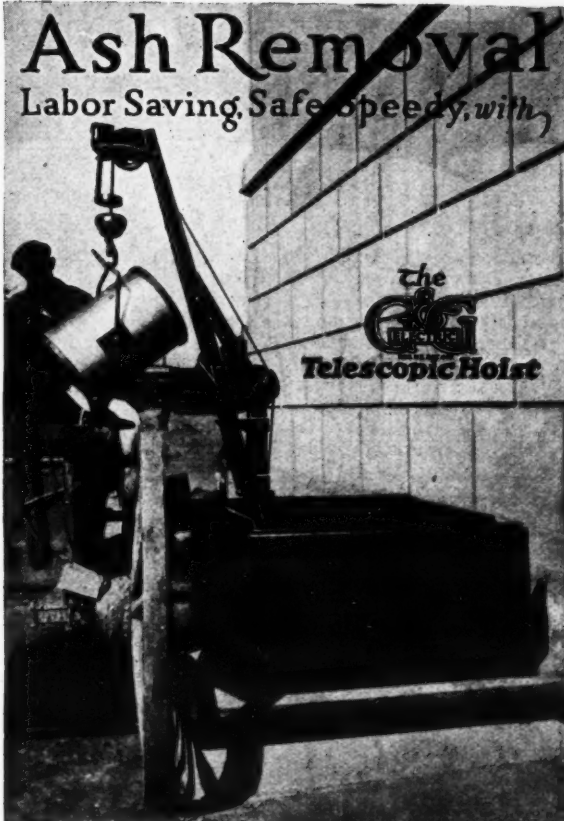
Hundreds of Schools are now using FINNELL Equipment

It pays dividends not only in actual time and labor-saving, but in greater cleanliness—improved morale of teachers and pupils alike. The summer vacation is an opportune time to make use of FINNELL equipment. Write . . . today.

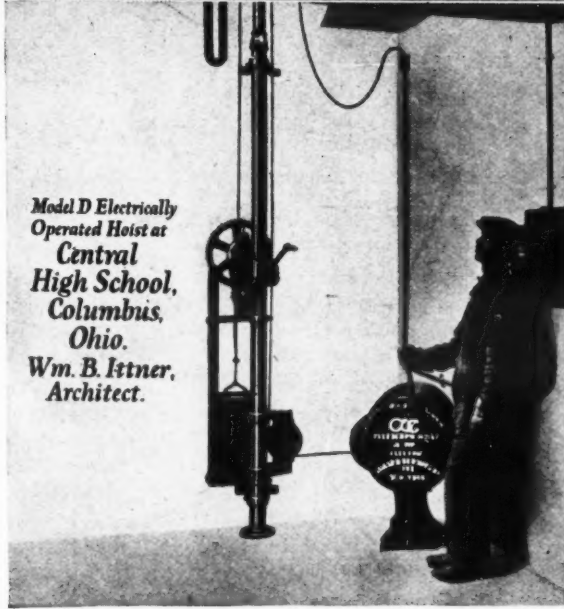
G&G
G&G

Ash Removal

Labor Saving Safe Speedy, with



The
G&G
Telescopic Hoist



Model D Electrically
Operated Hoist at
**Central
High School,
Columbus,
Ohio.**
Wm. B. Ittner,
Architect.

G&G Ash Removal Equipment will give your school many years of daily service

MORE than 1500 schools are G&G equipped. For safety's sake, G&G equipment thoroughly guards the sidewalk opening and protects pupils, pedestrians, and operator. Speed is desirable, so cans are raised at rate of 60 feet a minute. And, there is the matter of *economy*. Not only do G&G Electric Hoists use very little current, but they are built to last a lifetime. Recently, in New York, when the old Madison Square Garden was dismantled, two G&G Hoists were removed after constant use for 37 years. Put an end to ash removal problems in your school, whether the building is old or new—by installing G&G equipment. It will last as long as the building. Consult your architect or write us for specific data.

GILLIS & GEOGHEGAN

551 West Broadway, New York

G&G
G&G

The Herman Nelson Unit Heater



Leak Proof—Rust Proof—Indestructible

All the advantages of flexible unit heating, plus the exclusive Wedge Core Radiator that never requires service.

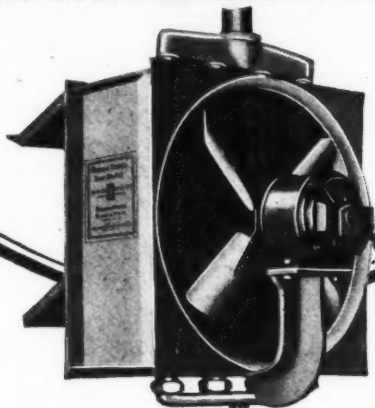
Lower installation cost—smaller pipe lines—no reducing valves necessary. Operating steam pressure from atmosphere to 125 lbs. Cannot be damaged by contraction or expansion strain—freezing cannot harm it.

So light is the Herman Nelson Unit Heater that it is often suspended from pipe lines. Flexible—can be moved from place to place—each unit operated separately if desired. Provides a long range uniform heat distribution, highly desirable in buildings of large cubic capacity. The correct heating unit for

**Factories • Mills • Railroad Shops • Roundhouses
Warehouses • Garages • Gymnasiums • Auditoriums**

write for complete information

THE HERMAN NELSON CORPORATION, Moline, Illinois
Makers of the UNIVENT and the HERMAN NELSON INVISIBLE RADIATOR



The Dunham Differential Vacuum Heating System



A modern application of an old principle

EVERY CAMPER who has visited the mountains has discovered the natural law which is utilized in the Dunham Differential Vacuum Heating System. He has discovered that water boils at a lower temperature in high altitudes than is the case at sea level.

There is no new basic principle utilized in the Dunham Differential System. Rather, it is the new application of an old and well known principle.

Steam generated in the mountains at a lower temperature than 212° is identical with steam generated in this new Dunham System, where mountain peak conditions of atmospheric pressure are produced by a vacuum pump. The steam thus generated in the Dunham Differential Vacuum Heating System is sub-atmospheric temperature steam. By this we mean that its temperature may be anywhere between 135° and 212° (or higher), depending on the vacuum maintained on the system. Such steam is adequate for heating during any but the most severely cold weather. Indeed, it has been found that on but very few days of the heating season is it necessary to fill the heating system with steam at or above 212°.

Savings in fuel with the Dunham Differential Vacuum Heating System logically follow. Less fuel need be consumed to generate low temperature steam, for, exactly as in the mountains, water boils much more readily when a part of the weight of the atmosphere has been removed from its surface. And because this steam is not so hot as steam in ordinary heating systems, excessive "wind-down opening" is eliminated.



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DUNHAM
This nameplate identifies a genuine D. V. H. A. M.
Radiator Type



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450 East Ohio Street, Chicago

Over sixty branch and local sales offices in the United States and Canada bring Dunham Heating Service as close to you as your telephone. Consult your telephone directory for the address of our office in your city.

(Concluded from Page 158)

All rooms are heated by unit ventilators with automatic control, supplemented in the classrooms with direct wall radiation. The assembly hall is heated by a separate fan system and can be used when required independent of any other part of the building.

The system of heating costs slightly more than the ordinary gravity system, but the additional cost is more than offset by the saving of space on the ground floor of the building.

The total cost of this building was \$313,297, including the furnishings, grading, and planting. The economy of planning is demonstrated by the per pupil cube of 541 cu. ft. and per pupil cost of \$261.95.

A SOUTHERN SCHOOL OF SPANISH DESIGN

(Concluded from Page 68)

sweep of winds which sometimes blow at velocities of from 75 to 150 miles an hour.

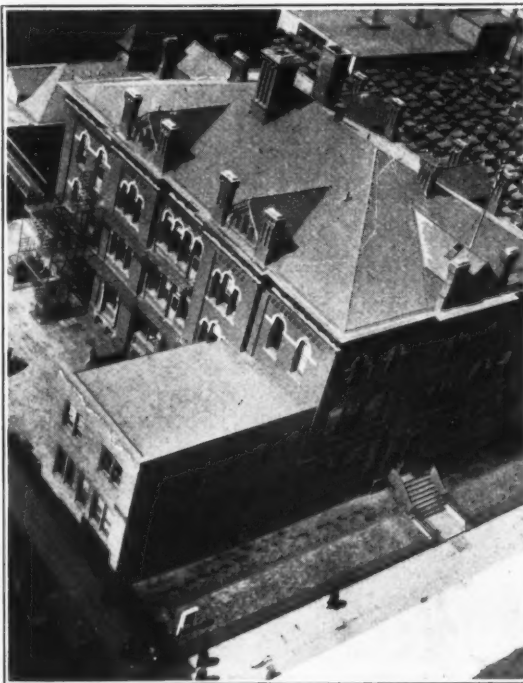
The kindergarten in this school is an octagonal room with an open exposure on six sides. It is provided with a fireplace in which logs are burned on days when the weather is chilly. The fireplace is provided for the protection of the little folks who are not able to withstand a few hours of cold weather as are their older brothers and sisters.

THE ABUSE OF SCHOOL PROPERTY

A serious charge against American school children is contained in an editorial comment in a recent issue of the *High School Journal* of the University of North Carolina. The editorial reads as follows:

"Professor J. M. Downum of the State Normal School at Boone, N. C., is undertaking to obtain data on the abuse, destruction, and deterioration of school plants. The matter he is investigating is an important one, and if Mr. Downum succeeds in gathering adequate and

reliable data that will show the aggregate financial loss that may be properly attributed to carelessness, or negligence, or willful disregard of property rights, or simple vandalism, he will render a distinct service. The figures will, no doubt, be of sufficient proportions to cause the public not only to take notice, but also, it is to be hoped, to institute remedial measures. There are apparently no carefully assembled data now available. This means that in order to gather the statistical information desired, a careful piece of research will be necessary.



THE CLEVELAND SCHOOL HEADQUARTERS FROM THE AIR. THE PRESENT OLD BUILDING IS TO BE REPLACED BY A MODERN STRUCTURE.

"The insurance companies may be able to supply a great deal of definite information on the subject, but not nearly all that will be needed. Observations and judgments for particular districts, or counties, or sections may be had in abundance, but they are not adequate for the purpose. Every one who has observed conditions can readily give isolated instances of the abuse or destruction of school property. As already suggested, the aggregate for a given period of time, say one calendar year, for a given state, or county, or section would be great when expressed in dollars and cents. But the more deplorable fact is the attitude of mind that takes it as a matter of course—the low state of culture, or refinement, or civic pride that it reflects.

"In this connection, Dr. E. C. Branson of the University of North Carolina, who is one of our keenest observers in the field of social-economics and withal a student of wide acquaintance with educational conditions, makes this observation:

" . . . I have looked into schools of all sorts in almost every state in the Union and in all the Central and West European countries, and my deliberate conclusion is that nowhere in the world are students as destructive of school properties as in our own South. There is nothing to equal our abuse of such properties anywhere else in the world."

"If Dr. Branson's 'deliberate conclusion' is correct, and there are many other observers, including the present writer, who will not question the validity of his judgment on this point, here is an opportunity for some effective home missionary work to be done. If our surmise is correct, Mr. Downum has begun a study that should be carried through in a scientific way to a successful conclusion."

Have You Seen JOANNA CLOTH?

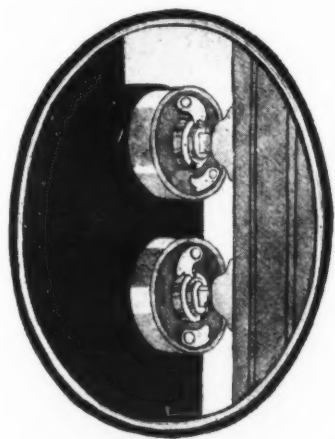
PLAIN and CORDED STRIPES



A WINDOW SHADE CLOTH
THAT RESISTS WEAR...
THAT SUN, DIRT, WEATHER
OR WATER WON'T HARM

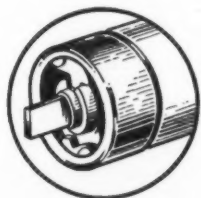
THINK of an entirely new kind of shade cloth—strong, long-wearing and with a smooth satin finish! One that, in spite of hard usage, will not discolor, crack, curl, bag or develop pinholes! That's Hartshorn Joanna Cloth—the ideal shade cloth for classroom use—spun, woven and finished by Stewart Hartshorn.

Joanna Cloth will solve troublesome school-shade problems for years to come. Ask your dealer to show you samples. Specify Joanna Cloth—on Hartshorn Shade Rollers.



Joanna Cloth mounted on Hartshorn Rollers equipped with No. 86 and No. 87 double brackets affords a perfect solution to the problem of admitting proper light and air to the classroom.

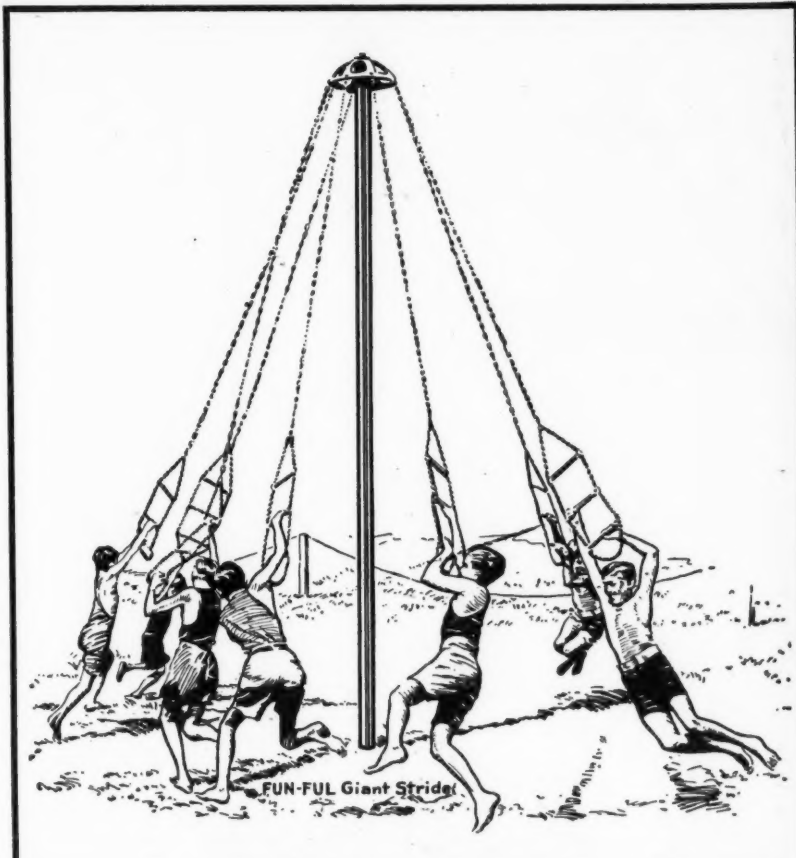
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Awarded Gold Medal Brazilian Centennial 1922-1923

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*"There'll be one on every
playground this year"*

THIS new Everwear outfit incorporates an entirely new principle of play function. It has many of the pleasing features of a Merry-go-round, Ocean Wave and Giant Stride, combined, but blazes an entirely new trail for itself.

The illustration describes its fun producing possibilities. From 15 to 20 children of all ages can use it at one time. It is strong enough for adults to use with absolute safety. It occupies small ground space.

It features stretching exercises — so beneficial and so cordially recommended by Medical authorities and Physical Instructors.

The Everwear line of Steel Playground Apparatus is full of new things this year and you will want Catalog No. 19.

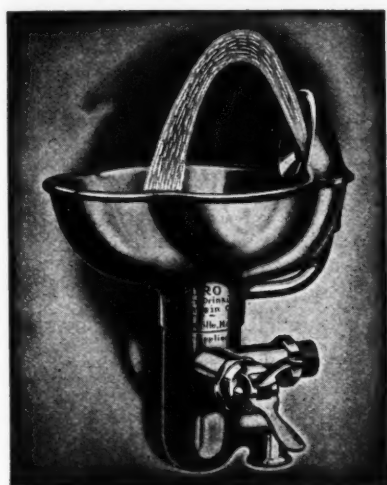
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STEEL PLAYGROUND APPARATUS

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DRINKING FOUNTAINS



The fountain illustrated was designed especially for use in schools.

Puro Drinking Fountains are made of solid bronze cast metal from heavily designed patterns. No breakage possible. There is nothing to crack, chip or become unsightly.

Puro Sanitary Drinking Fountains are highly finished and heavily nickel plated. They are always clean and inviting—do not require the continual care of enameled goods.

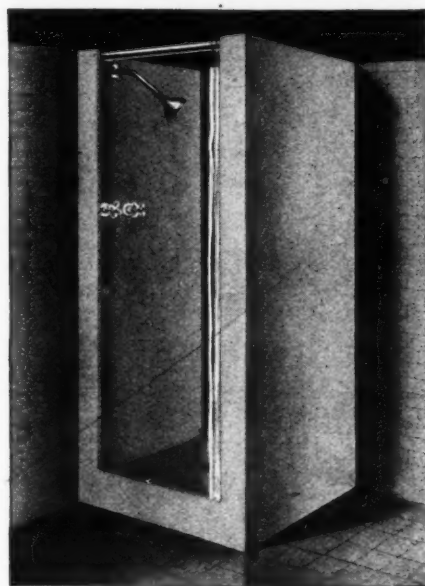
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Especially Designed for School Buildings
Ferrometal Unit Shower Stalls



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BOOK REVIEWS

Story-Fun

Second Book. By Ambrose L. Suhrie, Myrtle G. Gee, and John Martin. Cloth, 174 pages. Published by the World Book Co., Yonkers, N. Y.

Seven groups of stories, based on adventures of children and animals, all of child interest and carrying their young readers to the happy land of make-believe, are included in this second book. The devices for making children read silently with understanding, of teaching them to find and learn the meaning of new words, and of causing them to seek help when that is needed, are truly clever and effective. The book merits the title of the series: Individual Progress Reading.

Drafting for Engineers

By Carl L. Svensen. Cloth, 365 pages. Price, \$2.75. Published by D. Van Nostrand Company, New York City.

This book provides a complete introductory course for use in technical schools and colleges. Special chapters take up the principles and special forms of architectural, electrical, pipe, and structural drafting. Very complete technical tabulations and extended lists of problems are provided.

General Chemistry

By Thomas P. McCutcheon and Harry Seltz. Cloth, 417 pages. Price, \$3.50. Published by D. Van Nostrand Co., New York City.

A sentence of the authors' preface is significant: No effort has been made (in the text) to popularize the subject. The book is divided into two parts, theoretical chemistry and descriptive chemistry. With the essential facts presented clearly and completely in the book, no competent instructor can fail to make an introductory college course interesting and valuable.

Better English Habits

Teachers' Manual, Book One. By Alma Blount and Clark S. Northup. Cloth, 100 pages. Published by the Wheeler Publishing Company, Chicago, Ill.

The suggestions are complete and detailed.

A Graded Spanish Word Book

By Milton A. Buchanan. Paper, 196 pages. Pub-

lished by the University of Toronto Press, Toronto, Ontario, Canada.

This publication, which is issued at the instance of the American and Canadian Committees on Modern Languages, provides for teachers of Spanish what Kaeding's *Häufigkeitswörterbuch der Deutschen Sprache* does for the German language, what Henmon's *French Word Book* does for the French language, and what Thorndike's *Teachers' Word Book* does for the English language.

The book is in brief a classified list of 6,702 words and is based on a vast amount of study of Spanish prose and poetry as found in periodicals, plays, novels, verse, folklore, technical literature, and miscellaneous prose.

The work throughout gives evidence of the most careful study and application of the best teaching, orthographic, and mathematical principles. The compiler has not forgotten that while certain common words of the home, of the school, of the city, and of the workshop appear comparatively few times in the printed page, they are quite important and deserve to be included on the basis of their special utility. He has, therefore, applied more than the ordinary frequency-tests to his study of words and has adopted splendidly improved methods of verifying his findings. His list is colloquial Spanish as it is likely to be spoken by educated people.

The book deserves a place in the working library of every teacher of Spanish. It contains in full possibilities for building vocabularies, etc.

Plainer Penmanship

By John Oswald Peterson. Intermediate Book. Paper cover, 128 pages. Price, 32 cents. Published by The Bruce Publishing Co., Milwaukee, Wisconsin.

This is a textbook on penmanship designed to serve pupils in the seventh, eighth, and ninth grades. It contains selections from the more complete textbook by the same author, which serves the senior and junior high schools.

In the forepart of the present textbook attention is given to the position of the body when writing. Muscular movement is defined and correct pen holding is described. The various technical factors relating to paper, pencils, and writing are adequately dealt with.

Next, attention is given to specific movement drills. Under drills for developing the rolling motion, the retraced oval with its variations comes

into play. Then there are drills for developing the rolling motion, for push and pull motion, for controlling the gliding motion and for developing the wave motion. These drills are designed to train the hand and arm muscles in freedom of action and in providing that skill which enables the student to write legibly, rapidly, and gracefully. Then follows a constructive practice course. The writing of single letters and the grouping of letters are taught. Here the lessons become quite interesting. From the small letters the study enters upon the writing of capital letters. These, in every instance, are simple and graceful. Ornamental filigree is studiously avoided.

One of the features of the textbook consists of instructive quotations from the several presidents who have served the United States. In each instance, the quotation which is presented in the script taught in the book is followed by a facsimile signature of the distinguished writer.

Detroit Reading Test

By Claudia M. Parker and Eveline A. Waterbury. Tests I, II, III, and IV. The World Book Co., Yonkers, N. Y.

These silent reading tests are intended respectively for the second, third, fifth, and eighth grades, and consist of paragraphs of narration, description, and science material. The pupils are asked to answer two questions following each paragraph—one interpretive, and one factual—by underlining the correct word or phrase chosen from four. The vocabulary has been carefully chosen, and is based on Thorndike's standards as expressed in his *Teachers' Word Book*. Each of the tests has been tried out in the public schools of Detroit and carefully standardized.

Ora Maritima

By E. A. Sonnenschein. Introduction by Margaret Y. Henry. Cloth, 146 pages. The Macmillan Co., New York.

Three simple principles underlie the plan of this book: A language is most easily learned by reading and writing it; a continuous story of immediate interest to children conveys linguistic principles where unconnected and uninteresting materials fail; reading material, carefully graded so as to be easily within the ability of pupils, builds power, while selections of too many difficulties are discouraging and defeat their own purpose.

The present book tells the story of an English boy's vacation at the Kentish coast near Dover.

RESPONSIBILITY of the School Board in case of FIRE



Built for
two or three-
story buildings

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Standard Equipment in Over 100 Cities



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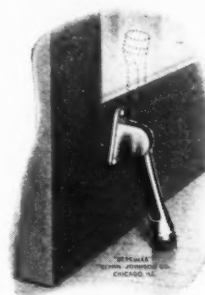
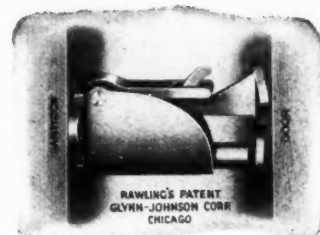
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Rawling's Automatic Door Holder and Bumper

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Can be installed on baseboard, chair rail or at top of door.



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Fulcrum or Leverage principle. Simple—Noiseless in operation. Splendid equipment on doors of every description. Especially Doors operating with door closers, or checks.

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The boy's very modern narrative of home life and vacation pleasures gradually connects with the story of the Roman invasion of Britain. The vocabulary and the sentence construction, while quite natural and spirited, develop a thorough study of the declensions and conjugations and in fact of the entire grammar of the first year's work. The vocabulary is surprisingly classical, and the final historic material forms a quite natural bridge to the study of Caesar. While a few of the references are a bit too insular and the long discussion of methods of teaching Latin belong in an appendix rather than in the introduction, the book is splendidly adapted to high-school use.

Our Wild Animals

By Edwin L. Moseley. Cloth, octavo, 310 pages. D. Appleton & Co., New York, N. Y.

Children frequently exhibit queer misconceptions about wild animals. On the one hand they have read fanciful stories in which wild creatures are endowed with human intelligence and wholly unnatural dispositions; on the other hand they are frightened by parents and other adults, and are thus deprived of familiarity with the true characteristics of many harmless but interesting animals.

The present book seeks to give accurate information, for fifth- and sixth-grade children, concerning the common wild animals of the United States. The author's own observations, and to some extent his wide familiarity with the authoritative literature of the subject, form the basis of the chapters. The descriptive material of the habits, characteristics, and life cycles of each animal, is enlivened by factual narratives of experiences and contacts with the animals. It is to be noted that these are not of scare-creating type nor of the wildly imaginative type told by ancient sages—but quite human and simple experiences.

The book is quite simple in language and is remarkably well illustrated with photographs and authentic drawings.

Teaching Arithmetic in the Primary Grades

By Robert Lee Morton. Cloth, 242 pages. Price, \$1.80. Published by Silver, Burdett & Company, New York City.

The place of arithmetic in the first three grades, the materials to be included in a course of study, and the best methods and devices of teaching—these three important topics form the subject matter of the book. The practical everyday elements of the teaching of counting and number concepts and of giving children a thorough ground in

the four fundamental operations are strongly stressed. The book has a practical tone that is reassuring and decidedly helpful.

Descriptive Geometry

By C. H. Schumann, Jr. Cloth, 251 pages. Price, \$2.50. Published by D. Van Nostrand Co., New York City.

The theory of drafting is fully presented in this text for college engineering classes.

New Everyday Arithmetic

By Franklin S. Hoyt and Harriet E. Peet. Second Book. Cloth, 376 pages. Price, 80 cents. Published by Houghton Mifflin Co., Boston, Mass.

Two features of this new arithmetic for fifth and sixth grades, stand out prominently and give a clue to the thoroughness with which the authors have attacked the compilation of problems. At the end of each year's work there is a standardized test, covering the matter studied, with complete details of time requirements and scores. The second feature is a "number gymnasium," or series of self-testing practice exercises for use during the sixth year. These exercises are in the nature of drill work which has been carefully standardized and which carries through the entire range of common operations and should do much to develop automatic skill.

The authors have used a wide range of useful devices for interesting children in the successive topics and principles and for developing a sense of number relations, the habit of quick computation, and the use of numbers in everyday activities. In one or two cases the introduction to chapters is a bit far fetched, but the practical type of the problems overshadows this straining for interest.

Extended Use of School Buildings

By Eleanor T. Glueck. In Bulletin 1927, No. 5, United States Bureau of Education.

This pamphlet presents a nation-wide study of the use of school buildings by individuals and groups for night schools, civic and social gatherings, recreational purposes, etc. The complete tabulation of uses in 43 states including 363 cities and 104 rural schools is included. The report indicates that in 909 cases the activities are carried on under public auspices, in 204 cases under combined public and private auspices, and in 134 cases under private control. The sources of support are public in 570 cases, public and private in 446 cases, private in 270 cases.

An interesting element in the report is the growth which is indicated by the report over a similar study prepared in 1919-20. The total increase in three years has been 55 per cent in schools, and 128 per cent in the number of cities reporting.

Losses in the use of schools are indicated in Chicago and St. Louis, and in a few other cities.

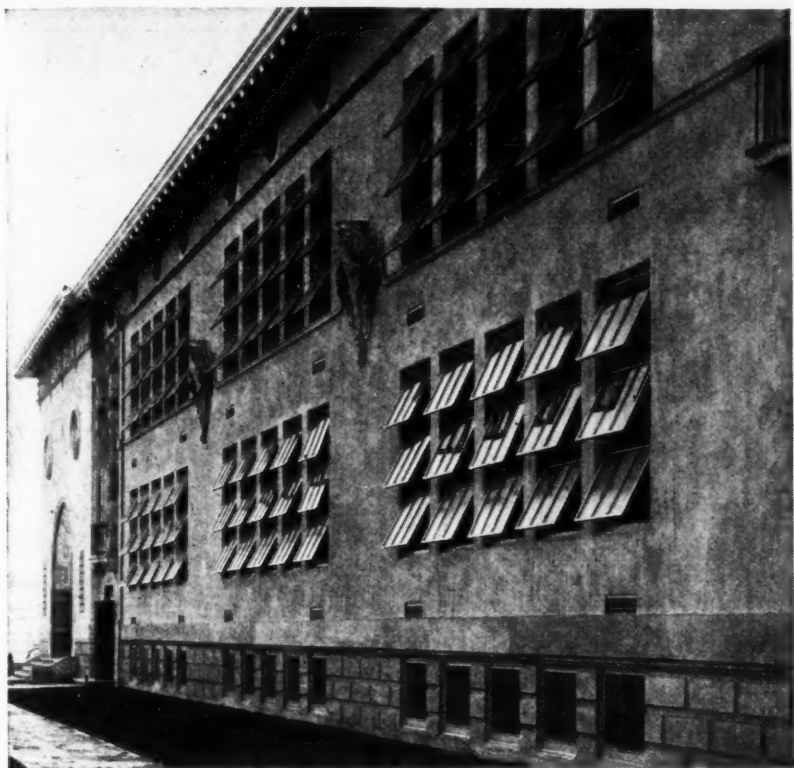
Junior-High-School Mathematics

By Samuel Hamilton, Ralph P. Bliss, and Lillian Kupfer. Book II. Cloth, 229 pages. Price, 88 cents. Published by The American Book Co., New York City, N. Y.

A study of recent mathematics for the junior high school would give the impression that the authors have felt it necessary to depart so far as possible from old accepted standards and to introduce as many novel ideas as they might collect from experimenters in method, in problem material, and in objective curriculum making. It is not to be wondered that the use of some of these texts has added to the confusion of the evolutionary process through which the intermediate schools are going, and has not added to the clarifying of immediate objectives and instructional materials.

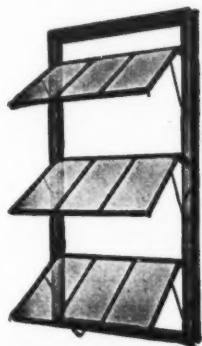
The present text, which is the second of a three-book series for the seventh, eighth and ninth grades, is amply progressive in content and method for the most eager and forward-looking teacher of the new mathematics, but it has not discarded the solid ground upon which growth and advancement have come during the past generation. The work is essentially that which has been offered in recent years in the eighth grade—ratio and proportion, square and cube root, measuring areas and volumes, taxes, insurance, banking problems, farming and forestry problems. Running through the entire work and treated in special chapters are the principles of equations and graphs and the measurements of simple geometric figures. All of the problems have been subjected quite apparently to a test of reality in that they have been chosen from business, industry, and home activities.

The average teacher will welcome the wide range in the difficulty of the problems, the tests and review materials and the collections of drill problems. Above all she will appreciate the evident freedom which the book allows for developing her own introduction to new topics without an excess of a verbose "setting," prepared by the authors and totally unsuited to her particular situation.



St. Mary's Parochial School, Phoenix, Ariz. Archt.: Lescher & Mahoney.
Contr.: A. F. Waselewski Co. Truscon Donovan Awning Type Windows.
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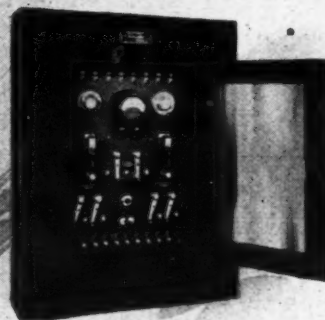
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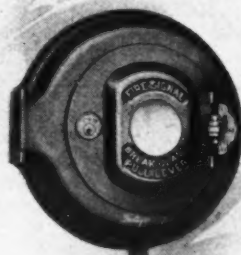


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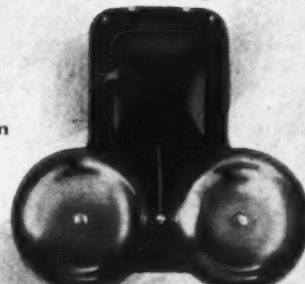
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These Fire Alarm Systems are accepted as a standard by leading architects, engineers, and school boards throughout the country.

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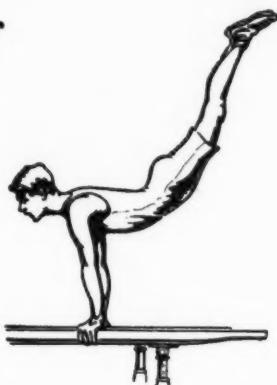
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WAYNE Steel Sectional GRANDSTAND

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CHICAGO CORRESPONDENCE

For many years the contract-plan or farming-out plan has been in operation between the school engineers and the school board. Under this plan engineers are paid varying amounts, up to \$50,000 a year, depending on the size of school. Janitors, firemen, and sweepers are employed by the engineers and are not under direct school-board control. An annual total of \$2,880,000 is at present paid to the engineers for school maintenance.

Due to a recent supreme-court decision it now becomes necessary to place the janitors, firemen, and sweepers under civil service, as well as the engineers, and place them under direct control of the school board.

In the past, experiments as to the relative cost to the school board of the direct-control and the contract plans, have shown greater economy in the contract plan.

In the principal's office of most Chicago schools, there is an extra teacher whose duties range from typing and making out reports and requisitions to scoring examination papers, substituting in classrooms, meeting parents, etc. These extra teachers draw teachers' pay. The president of the board of education has announced that these extra teachers are to be assigned as regular teachers in charge of a classroom and their places filled with civil-service clerks. This change would effect a money saving of upward of ten thousand dollars a year.

The extra teachers have protested vigorously. A committee waited upon the president and presented a legal opinion of Attorney-General Carlstrom to the effect that their positions are legal. Failing in their attempt to convince the president, according to the newspapers, they have charged that there is a political attempt to "grab" several hundred positions regularly belonging in the educational department.

In a resolution on the matter, they say the following:

"Substitution of civil-service clerks for extra teachers would not be economical. In many cases two or three clerks would have to be employed to take the place of one teacher. Furthermore, clerks would be unable to substitute for teachers in classroom work in emergencies. The worst feature of the change would be increasing the number of unassigned teachers from 1,600 to 2,000. That would mean that graduates of Chicago Normal College would have to wait until three years after graduation before being given a position in the schools."

The president of the board of education has announced that 250 employees in the business department of the school system, and every employee but one in the legal department of the school system, have been "fired" or have turned in their resignations, according to newspaper quotations.

During the last week of June, 25,000 pupils graduated from the Chicago public schools. In addition to these, there were 600 graduated from Chicago Normal College. The problem of assigning the normal-college graduates is becoming acute. It is said that all of the graduates of the class of June, 1925, have not yet been assigned and no subsequent graduates have been assigned. This is true in spite of the fact that the normal-college course was lengthened to three years.

Ten-story school buildings, with split elevator service for all floors above the fourth, are being investigated by School Architect John Christensen, as the result of a conference between Mayor Thompson and President J. Lewis Coath of the school board. "Why should school-building construction be different than that of any other institution handling large numbers of people?" asked Mayor Thompson, as reported in the *Herald-Examiner*. "The superstition has grown up that schools must be scattered over half a city block. That is because old school buildings were flimsy and in case of fire were traps."

"That day is past. Modern schools cannot burn because there is nothing in their construction that is inflammable. Fire risk is entirely a thing of the past in schools as now constructed."

"The question arises: 'Isn't ground too valuable to spread buildings over acres when they might as well go up into the air?' Even now we are embarrassed for enough playground space. And Chicago has just started to grow. I want to know why we can't go up into the air, just as we have had to do with other buildings."

"The doubt of emptying them with elevators is absurd. On Monday mornings, when municipal courts are in session, the city-hall elevators handle more persons than would be in any school. The Woolworth Tower in New York does it all the time. There is an eight-story school building in New York that is very successful."

"Every argument I have heard raised against skyscraper schools is the same once used against high office buildings—and just as fallible."

Senate Bill 575, the storm-center of a filibuster in the Illinois General Assembly, was killed in a

compromise whereby other Chicago finance bills were passed. This bill provided for a 40-cent increase in the educational fund but cut the building fund 80 cents, thus requiring a new policy of building construction by bond issues. Meanwhile, the city fund was to get a 40-cent increase in tax rate. The net result would be immediate funds available for both the schools and the city, with no immediate increase in taxes. Miss Margaret Haley, business representative of the Chicago Teachers' Federation, vigorously opposed Senate Bill 575; probably her opposition more than anything else, led to its defeat.

Meanwhile, the city got its 40-cent tax rate increase through another bill, and the newspapers announce that the school board is about to launch forth on a bond-issue policy of school-building erection on existent authority.

If this is true, about the only outcome of the battle against Senate Bill 575 is that the educational fund got no revenue relief. This is the fund from which teachers are paid and from which educational supplies are purchased.

The president of the board of education had announced a contemplated raise in teachers' salaries to be put into effect in September. Now he is quoted in all the newspapers as saying that a reduction of 20 per cent in salary will be necessary if the schools are to remain open. The reason for this is the failure to secure revenue relief for the overburdened educational fund.

Miss Haley characterizes this threat as "a political bogey."

Personal News of Superintendents

—C. W. Howard, who for the past four years was superintendent of the Winona Consolidated Schools, Winona, Kansas, was elected superintendent of the Holcomb Consolidated Schools, Holcomb, Kansas, for the coming school year.

—Mr. W. F. Huston has resigned as superintendent of Henry county, Illinois, to accept the principalship of the Andover Community High School at Cambridge, Ill.

—Mr. C. W. Conrad of Marion, Ill., has been re-elected for a third term.

—Mr. B. F. Baumgardner of Danville, Ohio, has become superintendent of schools of Holmes county. Mr. W. B. Edgerley succeeds Mr. Baumgardner at Danville.

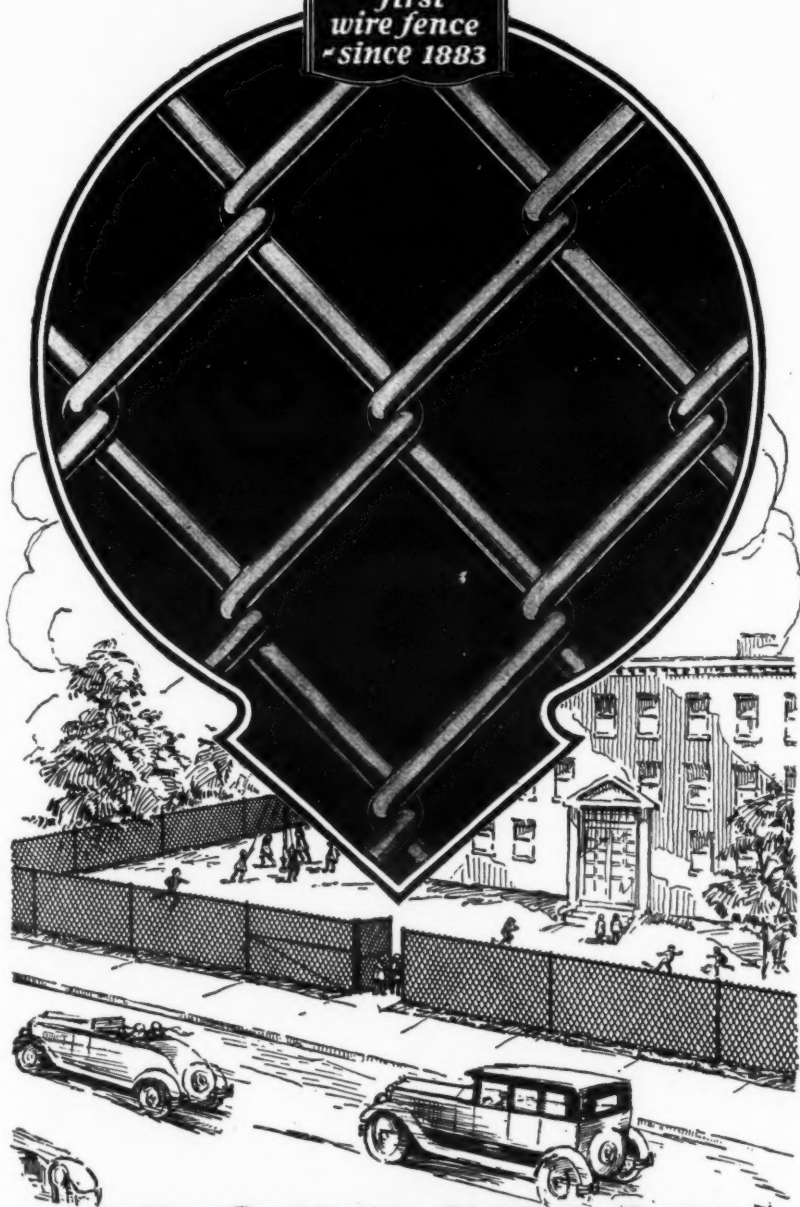
—Dr. W. C. T. Adams of Keene, N. H., has been reelected for a seventh term as superintendent of schools.

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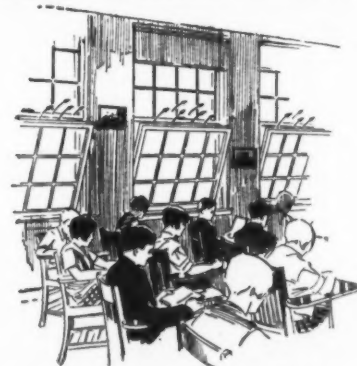
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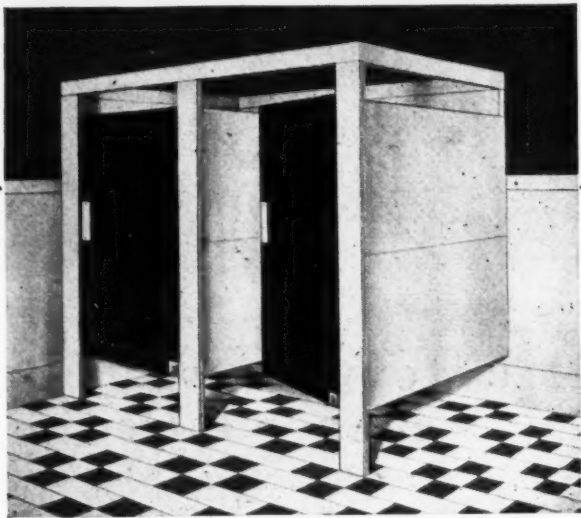


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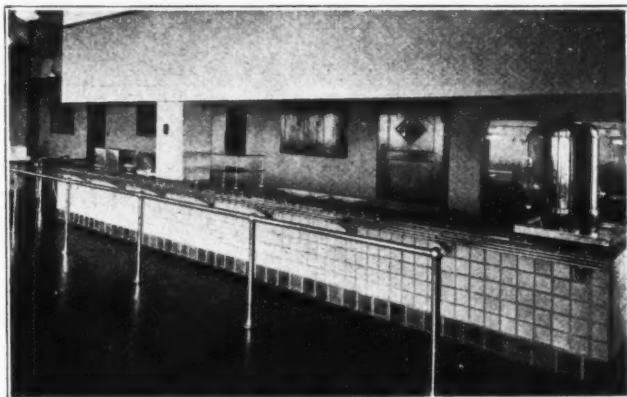
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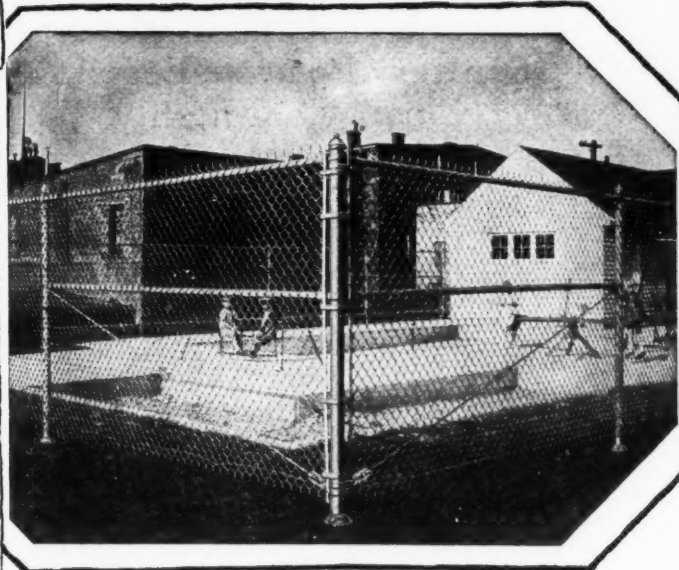
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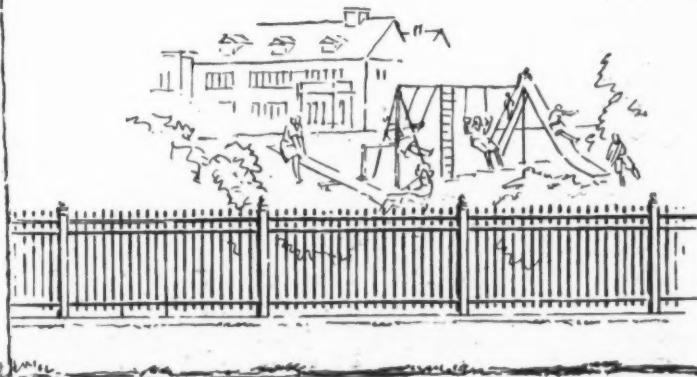
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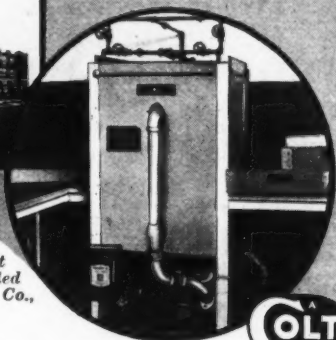
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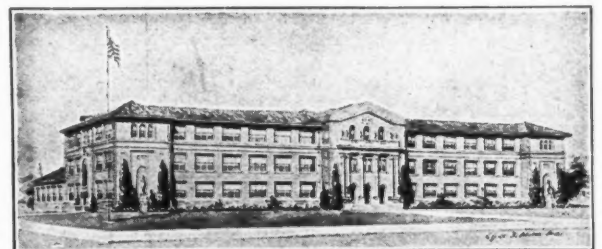
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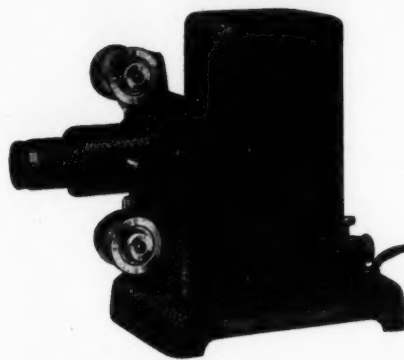
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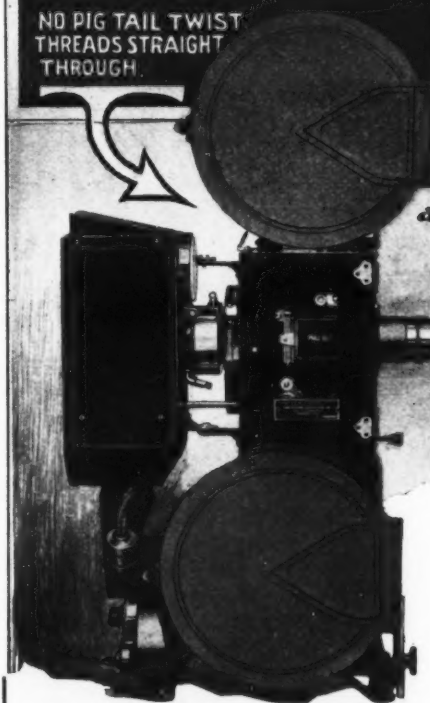
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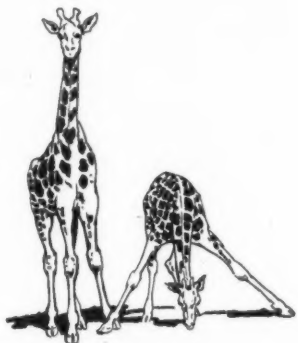
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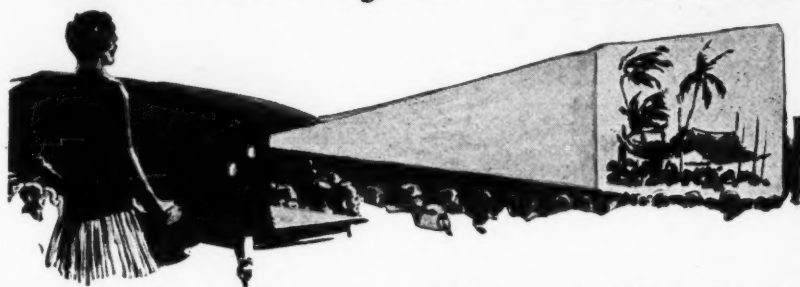
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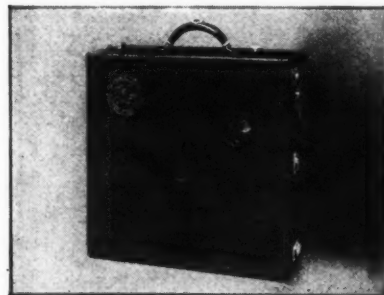
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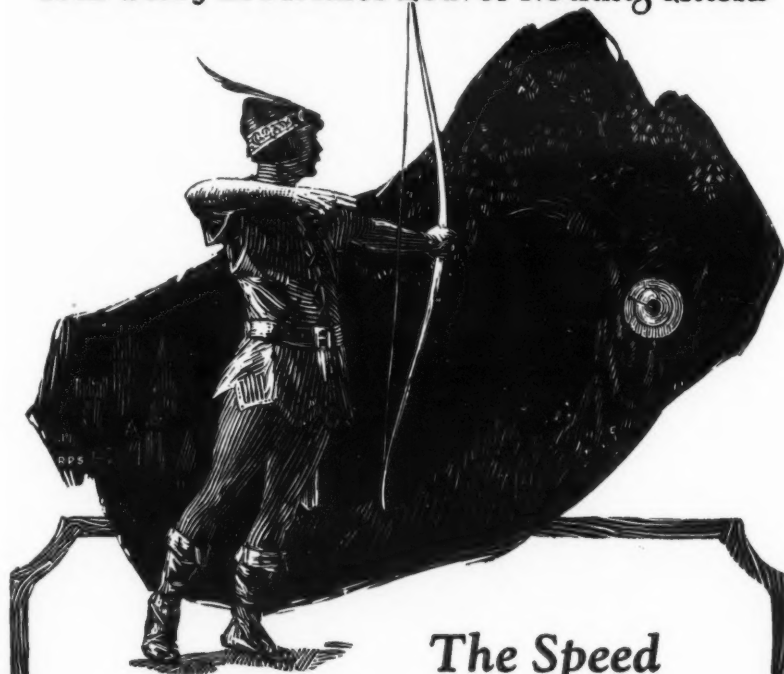
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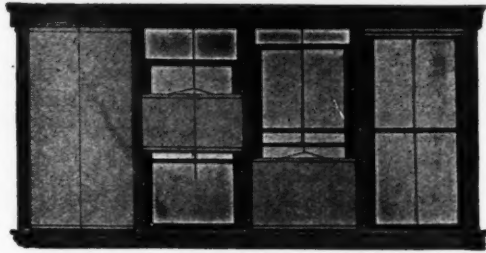
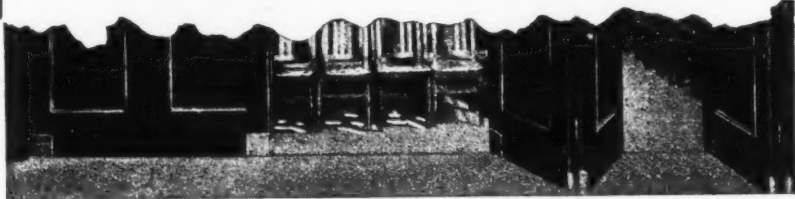
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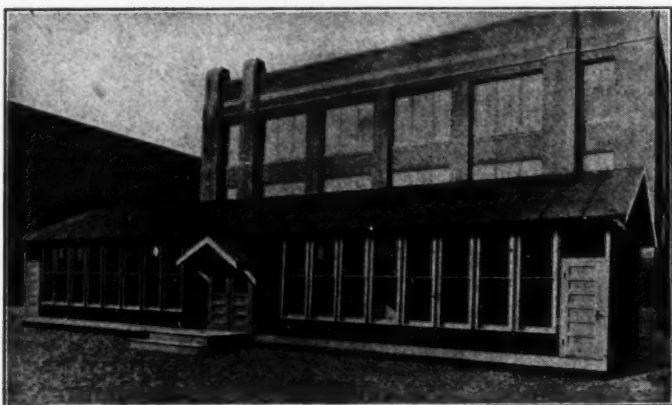
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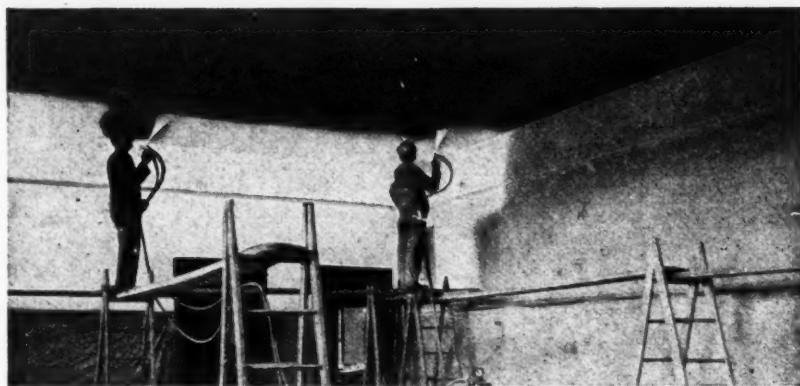
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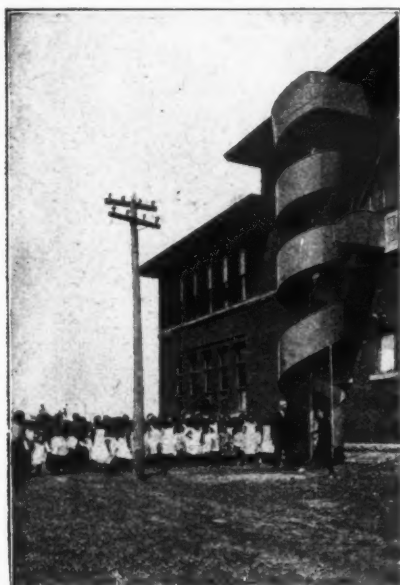
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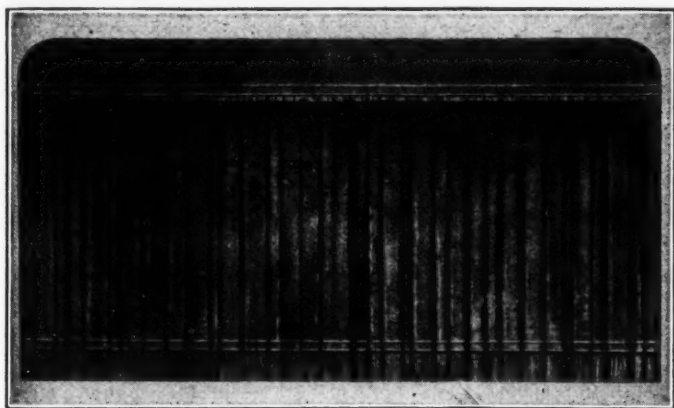
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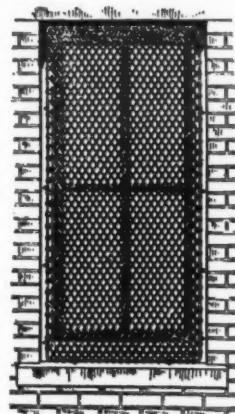
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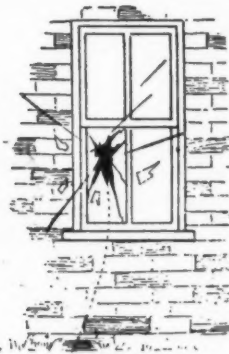
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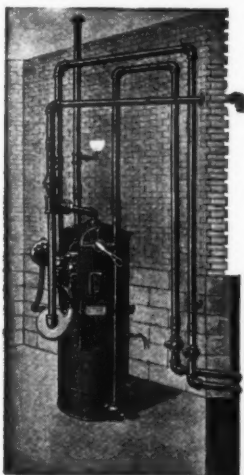
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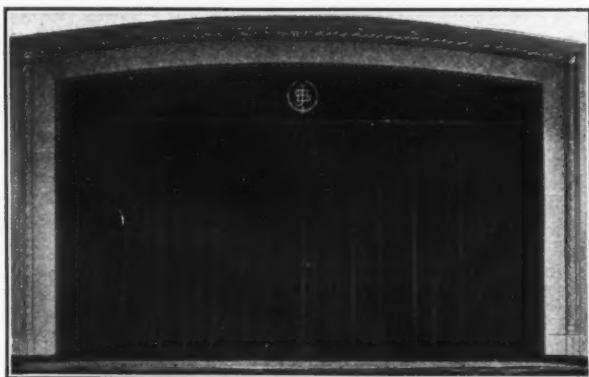


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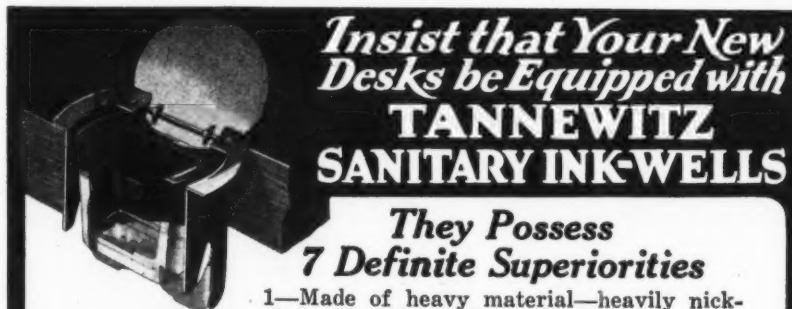


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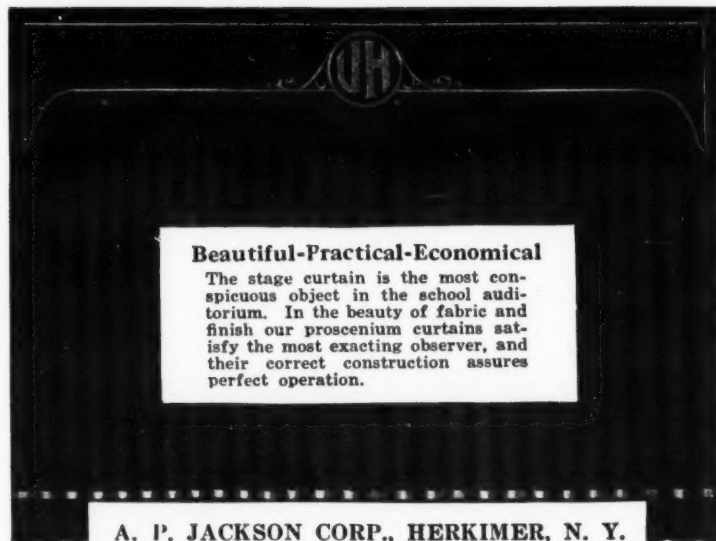
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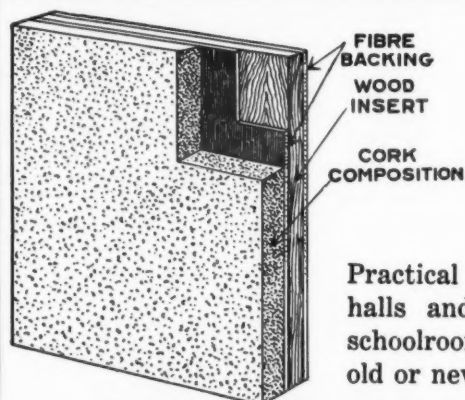
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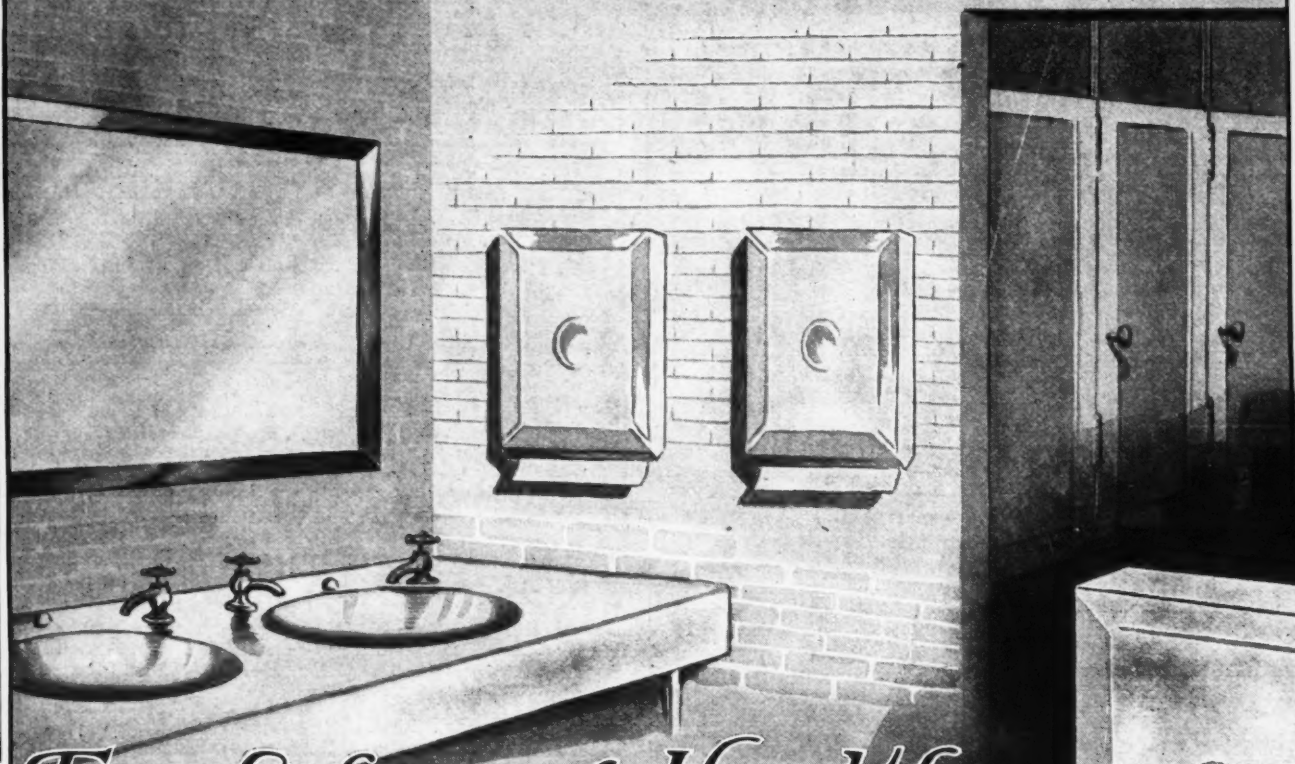
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School children now have a fair fighting chance to grow up in health and vigor because of the little safeguards placed upon their way.

The Nibroc Towel has taken a modest place among the agencies of good health in the public schools.

It is clean; it is the children's safeguard in the washroom; and it is—besides all that—a satisfactory towel—soft, absorbent, efficient, tough and enduring of rough quick use.

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(Provided with lock)

Delivers but
ONE NIBROC TOWEL
at a time, clean and fresh
to the user.

Capacity of Cabinet
300 Nibroc Towels.

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and without obligation to you, our representative will call with samples and advise you regarding the advantages in using Nibroc Towels.

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School Board Journal

DIRECTORY OF EQUIPMENT AND SUPPLIES

The names given below are those of the leading and most reliable Manufacturers, Publishers and Dealers in the United States. None other can receive a place in this Directory. Everything required in or about a schoolhouse may be secured promptly and at the lowest market price by ordering from these Firms.

ACOUSTICS

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Celotex Company, The
ADJUSTABLE SHELVING
Garden City Plating & Mfg. Co.

AIR CONDITIONING

American Blower Company
Buckeye Blower Company
Buffalo Forge Company
Nelson Corporation, The Herman

AIR WASHERS

American Blower Company

ALUMINUM WARE

Permalum Products Co., The

ARCHITECTS

(See Schoolhouse Architects' Directory)

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Gillis & Geoghegan

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Arlington Seating Company
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Flanagan Company, A.
Heywood-Wakefield Co.
Kundt's Company, The Theodor
National School Equipment Co.
Peabody School Furniture Co.
Rowles Co., E. W. A.
Standard Mfg. Company
Steel Furniture Company

BASEMENT SASH, STEEL

Detroit Steel Products Company

BASEMENT WINDOWS, STEEL

Detroit Steel Products Company

Lupton's Sons Co., David

BLACKBOARD CLEANER

Mohawk Slate Machine Co.

Oakite Products, Inc.

BLACKBOARDS—MFRD.

Beaver Products Co., Inc., The
Beckley-Cardy Company
Flanagan Company, A.
Gregory Blackboard Company
N. Y. Silicate Book Slate Co.
Rowles Co., E. W. A.
Standard Blackboard Company
Weber Costello Company

BLACKBOARD—SLATE

Flanagan Company, A.
Natural Slate Blackboard Co.
Penna. Structural Slate Co.
Rowles Co., E. W. A.

BLEACHERS

Circle A Products Corp.
Leavitt Mfg. Company
Wayne Iron Works

BOILERS

Frost Mfg. Company, The
Heggie Simplex Boiler Company
Kewanee Boiler Company
Pacific Steel Boiler Corp. of Ill.

BOOK CASES

Rand Kardex Bureau
Peterson & Company, Leonard
Wiese Laboratory Furniture Co.

BOOK COVERS

Holden Patent Book Cover Co.
Iroquois Publishing Company
Walraven Book Cover Co., A. T.

BOOKKEEPING MACHINES

Remington Typewriter Company

BOOK PUBLISHERS

American Book Company
Bruce Publishing Co.
Gregg Publishing Company
Harter School Supply Company
Heath & Co., D. C.
Houghton, Mifflin Co.
Iroquois Publishing Company
Laidlaw Brothers
Lippincott Company, J. B.
Merriam Co., G. & C.
Winston Co., The John C.

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Milwaukee Dustless Brush Co.
Palmer Company, The

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Detroit Steel Products Company
Duriron Co., Inc., The
Indiana Limestone Company
Lupton's Sons Co., David
Milwaukee Corrugating Company
National Assn. of Marble Dealers
Structural Slate Company
Truscon Steel Company

BUILDING STONE

National Assn. of Marble Dealers

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Weber Costello Company

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Sani Products Co., The
Standard Gas Equipment Corp.
Van Range Co., John
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CERTIFICATES OF AWARDS

Goes Lithographing Co.

CHAIRS

Beacon Steel Furniture Company
Clarín Manufacturing Co.
Derby & Company, Inc., P.
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Weber Costello Company

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Permalum Products Co., The

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Hansen Manufacturing Company

Landis Eng. & Mfg. Co.

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Wiese Laboratory Furniture Co.

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Sheldon & Co., E. H.

Standard Gas Equipment Corp.

Van Range Co., John

Wiese Laboratory Furniture Co.

DOOR CHECKS

Norton Door Closer Co.

Sargent & Company

DOOR HOLDING EQUIPMENT

Glynn-Johnson Corporation

Richards-Wilcox Mfg. Co.

DOORS, SOUND PROOF

Irving Hamlin

DOORS, STEEL-FIREPROOF

Detroit Steel Products Company

Lupton's Sons Co., David

DRAFTING DEPT. FURNITURE

Christiansen, C.

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New York Blue Print Paper Co.

Sheldon & Co., E. H.

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DRINKING FOUNTAINS

Century Brass Works, Inc.

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Murdock Mfg. & Supply Co., The

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Puro Sanitary Drink. Fount. Co.

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Anchor Post Fence Company

Cyclone Fence Co.

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Rand Kardex Bureau

FINANCES

McNear & Co., C. W.

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Standard Electric Time Company

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Standard Conveyor Company

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Potter Manufacturing Corp.

Sargent & Company

Steffens-Amberg Company

Vonnegut Hardware Co.

FIREPROOF DOORS

Detroit Steel Products Co.

Lupton's Sons Co., David

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Milwaukee Corrugating Company

FLAGS

Annin & Co.

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Rowles Co., E. W. A.

FLOORING

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Oak Flooring Bureau

Stedman Products Company

United States Quarry Tile Co.

FLOORING—COMPOSITION

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The Duraflex Company

Stedman Products Co.

FLOOR COVERING

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The Duraflex Company

Stedman Products Co.

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The Duraflex Company

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Norton Company

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Clow & Sons, James B.

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Beacon Steel Furniture Co.

Clarín Mfg. Company

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Standard Mfg. Company

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Hamlin, Irving

Richards-Wilcox Mfg. Co.

Wilson Corp., Jas. G.

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American Seating Co.

Arlington Seating Company

Beacon Steel Furniture Company

Columbia School Supply Company

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Gunn Furniture Company

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Imperial Desk Company

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Maple City Stamping Company

National School Equipment Co.

New York Blue Print Paper Co.

Peabody School Furniture Co.

Rand Kardex Bureau

Readsboro Chair Company

Rowles Co., E. W. A.

Royal Metal Mfg. Co.

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Steel Furniture Company

Union School Furnishing Co.

Walrus Mfg. Company

Welfare Seating Company

Wiese Laboratory Furniture Co.

GAS MACHINES

Matthews Gas Machine Co.

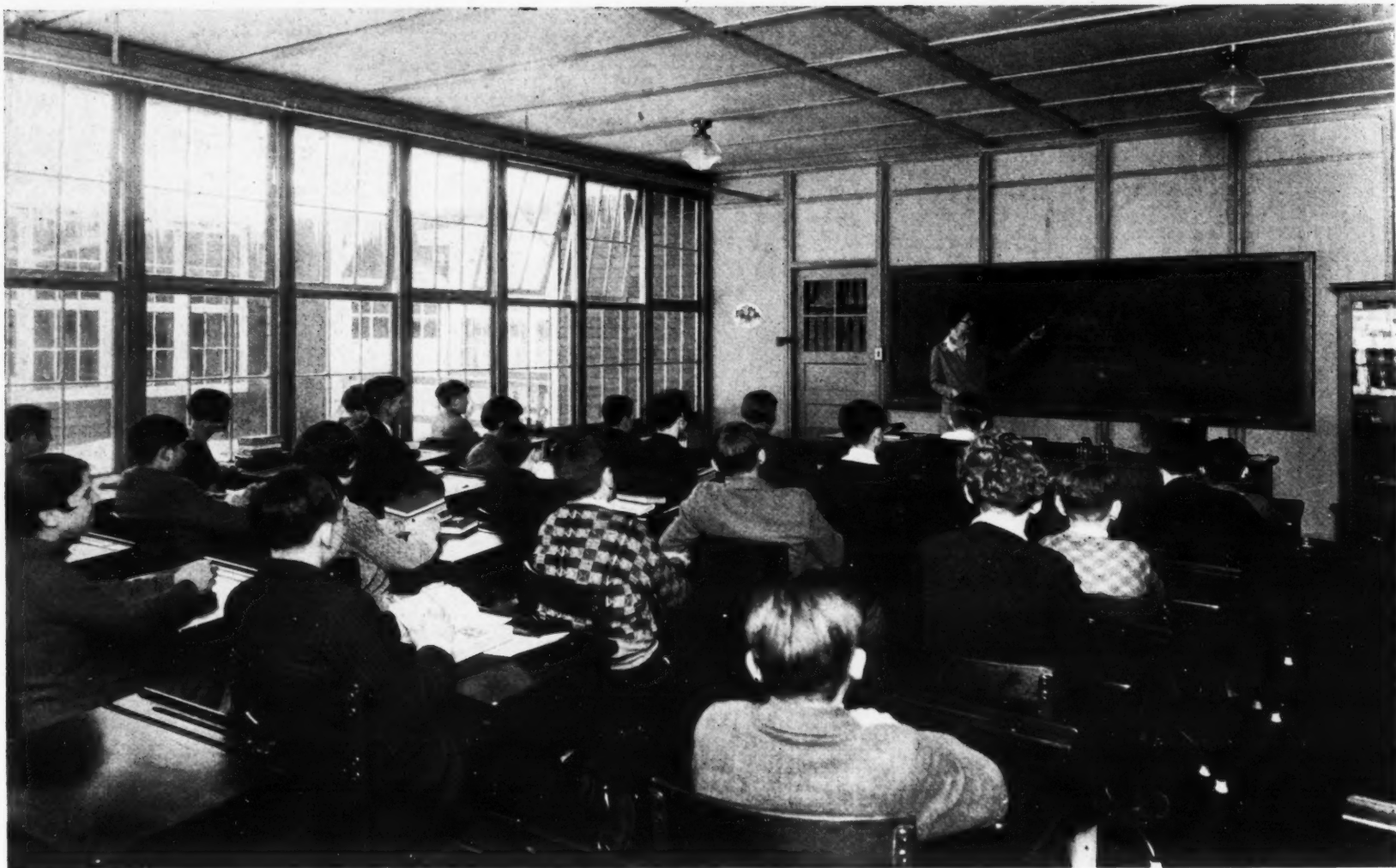
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Manufacturers Glass Company

GLOBES

Flanagan Company, A.

Look Into These Better Class Rooms To-day They Care For Excess Fall Enrollment—Quickly, Comfortably—At *Moderate Cost*



CIRCLE A Schools mean class rooms right away. They take care of this fall's excess enrollment immediately.

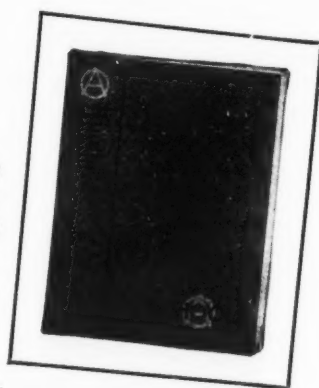
They go up quickly. In eight days, four men can erect a two-room school for eighty pupils.

And Circle A Schools cost far less—far less to maintain and heat. They re-sell for a good price. They keep the school board's budget healthy to the end of every year.

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in five days.]]*

*Send
for this book
and our free
proposal.*



open top and bottom giving a complete ventilation without draft.

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The names given below are those of the leading and most reliable Manufacturers, Publishers and Dealers in the United States. None other can receive a place in this Directory. Everything required in or about a schoolhouse may be secured promptly and at the lowest market price by ordering from these Firms.

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Weber Costello Company

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Clarke Sanding Machine Company

PORTABLE SCHOOLHOUSES
American Portable House Co.
Armstrong Co., The
Asbestos Buildings Co.
Bossert & Sons, Louis
Circle A Products Corporation
Merishon & Morley
Togan-Stiles Company

PROJECTION LANTERNS
Spencer Lens Co.
Trans-Lux Daylight Picture
Screen Corp.

PROJECTORS
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Holmes Projector Company

PUBLIC ADDRESS SYSTEMS
Graybar Electric Company

RANGES
Cleveland Range Company, The

RECORD SYSTEMS
Rand Kardex Bureau

REFRIGERATORS
General Refrigeration Company

REFRIGERATION MACHINES
General Refrigeration Company

REINFORCED STEEL
Berger Manufacturing Company

ROLLING PARTITIONS
Acme Partition Company
Wilson Corp., Jas. G.

SANDERS
Clarke Sanding Machine Company

SAFETY STAIR TREADS
American Abrasive Metals Co.

SASH OPERATING DEVICES, STEEL
Detroit Steel Products Company

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Detroit Steel Products Company
Lupton's Sons Co., David

SASH, VENTILATING
Detroit Steel Products Company

SCALES
Continental Scale Works

SCIENTIFIC APPARATUS
Knott Apparatus Co., L. E.
Rowles Co., E. W. A.

SCIENTIFIC APPARATUS—Electr.

SCENERY
Windowcraft Valance & Drapery
Co.
Standard Electric Time Company

SCREENS—PICTURE
Trans-Lux Daylight Picture
Screen Corp.

SCRUBBING EQUIPMENT
Continental Chemical Corporation
Finnell System, The

SHOWERS
Clow & Sons, James B.
Hoffmann & Billings Mfg. Co.

SIGNAL SYSTEMS
Hansen Manufacturing Company
Holtzer-Cabot Electric Company

SKYLIGHTS—METAL
Lupton's Sons Co., David
Milwaukee Corrugating Co.

SLATED CLOTH
N. Y. Silicate Book Slate Co.
Weber Costello Company

SPRAY PAINTING EQUIPMENT
Vortex Mfg. Co.
DeVilbiss Mfg. Co., The

STAFF LINERS
Weber Costello Company

STAGE CURTAINS, EQUIPMENT AND SCENERY
Acme Scenic Studios
Beck & Sons Co., The Wm.
Jackson Corp., A. P.
Kansas City Scenic Co.
Lee Lash Studios
Novelty Scenic Studios
Tiffin Scenic Studios
Twin City Scenic Company
Universal Scenic Studios, Inc.
Volland Scenic Studios, Inc.

STAGE EQUIPMENT
Windowcraft Valance & Drapery
Co.

STAIR TREADS
Alberene Stone Company
American Abrasive Metals Co.
Norton Company
Safety Stair Tread Co., The
Stedman Products Co.

STATIONERS
Blair Company, J. C.

STEEL CASINGS—Doors, Windows
Milwaukee Corrugating Company

STEEL JOISTS
Truscon Steel Company

STEEL SASHES
Detroit Steel Products Company

STEEL STORAGE CABINETS
Durabilt Steel Locker Co.
Durand Steel Locker Company
Medart Mfg. Co., Fred

STEEL WINDOWS
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Lupton's Sons Co., David

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Gunn Furniture Company
Mutschler Brothers Company
Rand Kardex Bureau
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Victor Talking Machine Co.

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Standard Electric Time Company

TEMPERATURE REGULATION
Buffalo Forge Company
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National Paper Products Co.
Palmer Company, The

TOWELS
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Ray West Paper Company
Brown Company
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Structural Slate Company
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Remington Typewriter Co.
Smith, L. C., & Corona Type-
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Allen & Billmyre Co., Inc.
Graybar Electric Company
Invincible Vac. Cleaner Mfg. Co.
Spencer Turbine Company, The
Super Service Co., The

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American Foundry & Furnace Co.
Buckeye Blower Company
Buffalo Forge Company
Dunham Company, C. A.
Milwaukee Corrugating Co.
Nelson Corp., The Herman
Peerless Unit Vent. Co., Inc.
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VARNISHES
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VENTILATORS
Buffalo Forge Company
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WAINSCOTING
Stedman Products Co.

WARDROBES
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Wilson Corp., Jas. G.

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WATER COLORS
American Crayon Company

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Clow & Sons, Jas. B. (R. U. V.)

WEATHERSTRIPS
Athey Company, The
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WINDOWS—ADJUSTABLE

Austral Window Company
Detroit Steel Products Company
Lupton's Sons Co., David
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Universal Window Company
Williams Pivot Sash Company

WINDOW FIXTURES
Austral Window Company
Columbia Mills, Inc.
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VOCATIONAL EQUIPMENT
Columbia Mills, Inc.
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WINDOW GUARDS
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Badger Wire & Iron Works
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Austral Window Company
Detroit Steel Products Company
Williams Pivot Sash Company

WINDOW SHADE CLOTH
Columbia Mills, Inc.
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WINDOW SHADES
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Wallace & Co., J. D.

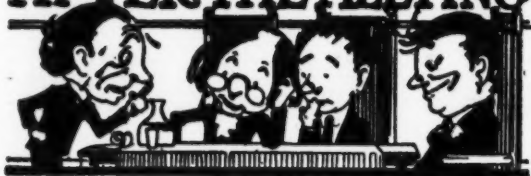
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AFTER THE MEETING



Most schoolmen have their favorite jokes; most of these jokes illustrate some school point, some a school issue, that is, something that relates to school conditions. In this column for a time, we are going to bring to you the favorite joke or jokes of school officials, and all those folks for that matter who are interested in schools.

We feel that this type of joke column will be of value to all persons interested in schools. We trust that these jokes will be of help to you in putting sunshine into the daily task, and also in putting across a proposition in your speech that needs the driving force of wit.

SUBSTITUTING

Mr. Frank E. Wilson, who is in charge of the Division of Examination and Licensing for the Ohio State Department of Education, sometimes substitutes for the Ohio State Director of Education. Occasionally he is introduced as his chief. It is very easy to imagine some of the explanations that necessarily have to follow. Mr. Wilson, however, has a very clever joke that eases the situation.

In a certain family twin boys, Paul and Pete, were so alike in looks that their parents were able to distinguish the one from the other only by the characteristic brightness of Paul and the dullness of Pete. In due time the boys grew to college age and the parents decided to send bright Paul to college while dull Pete was to be kept at home to run the farm. Upon presenting himself before the college-entrance board Paul was informed that to enter the college he must answer three questions in the presence of the board. First, "How high is the sky?" Second, "How far is the east from the west?" Third, "What do I think?" He was to be given until the next day to answer.

Paul set out for home and reported that after all he did not think he was smart enough to enter college. He repeated the three questions he would have to answer next day and declared that he could not answer any of them. Dull Pete, listening to the report and the questions, had an idea and begged to be allowed to go in Paul's place next day, which arrangement was finally agreed upon. Pete presented himself before the entrance board next day and announced himself ready to answer the three questions. "Well," said the chairman, "how high is the sky?"

"As high again as half," responded Pete.

"And," said the chairman, "how far is the east from the west?"

"Same distance as the other way," declared Pete.

"And now," said the chairman, severely and with much deliberation, "what do I think?"

And Pete scored a knockout by replying confidently, "You think this is Paul, but it's Pete."

APOLOGY NEEDED

Mr. Herbert W. Lull, superintendent of schools, Newport, Rhode Island, tells a story that has the tang of the sea and a very caustic criticism of folk who cannot apologize gracefully:

A naval officer tells the following: "An irritated petty officer said to one of his men: 'You are not fit to carry slops to pigs.'"

"The man appealed to a superior officer who ruled that the petty officer should apologize. He did so in this way: 'You are fit to carry slops to pigs.'"

SOUNDING THE CONSTITUENTS

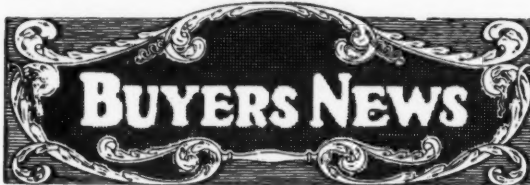
Occasionally it behooves a superintendent to do a little checking on how he is standing in his community, especially about the time new contracts are being considered. Mr. C. A. Greene, superintendent of schools, St. Joseph, Missouri, tells a story that very well exemplifies this attitude.

A certain principal in a city school system went to the drug store one evening and noticed a young colored boy calling up some party over the telephone. He was apparently inquiring whether or not they needed a porter. He seemed to be very insistent about wanting the position

and inquired quite in detail in reference to the satisfaction and the efficiency that was being rendered by the porter the gentleman had already employed. But the gentleman reported that his work was entirely satisfactory in every way and he did not want to dismiss him to take another.

After the telephone conversation was over, the principal inquired of the colored boy: "Sam, why were you so interested in wanting to know about the work done by that man's porter?"

The colored boy replied: "Because I am the porter. I was simply finding out whether the boss was satisfied."



Issue Feralun Specification File

The American Abrasive Metals Company of New York City has issued a specification file containing specification sheets and blue prints. These specification sheets give complete information of Feralun "antislip" treads covering their composition, application, durability, and use.

The Feralun antislip tread has become an important safety factor in school use and has proved efficient as an antislip and durable surface. Installations of these treads have withstood the abrasions of traffic of millions of people and in school buildings this means practically the life of the structure. Feralun is fireproof as well as slip-proof which makes it doubly useful in school buildings.

Information concerning the Feralun antislip stair treads may be obtained from the American Abrasive Metals Co., 50 Church St., New York City.

New Catalog of Buffalo Ventilating Fans

The Buffalo Forge Company, of Buffalo, New York, has issued its new Catalog No. 422, illustrating and describing the duplex and turbo conoidal ventilating fans put out by the firm. The booklet contains 23 pages devoted to the advantages in design and characteristics of Buffalo double-curved blade fans, as well as information on the application of the fans to heating and ventilating service. Attention is directed to the advantages of direct-driven multiblade fans, also double-width fans, fan characteristics, and standard arrangements of housing and drive suitable for turbo and duplex fans.

A set of specifications, giving outside diameters, general outlines, and dimensions in inches, for the installation of Buffalo conoidal fans is given for the benefit of users.

The firm offers the services of its engineering department to school authorities and architects who plan new fan installations in their buildings.

DeVry Announces Summer Service Department

The DeVry Corporation of Chicago, Illinois, has recently announced the opening of a summer-service department for the benefit of school officials who own and operate motion picture projectors or stereopticon equipment.

A projector or stereopticon, like any other piece of school equipment, needs a checking over to insure satisfactory use during the next school term. During the summer season the motion picture machine is not in regular use and it is at this time that an opportunity is afforded to have a general mechanical and optical check-up.

A machine which is received at the factory is inspected and a report is rendered in detail. This is followed by a letter giving an estimate on the cost of service. Reports are given in a day or two after the machine reaches the factory and from three days to a week are required to place the machine in condition for return. The service charges are nominal and cover only such items as are actually required.

The firm also announces a number of new developments in portable motion picture projectors, most of which have been designed for the DeVry projector and incorporated in the later models. A few of the features which have been marketed are the stop-on-film shutter, which makes it possible to stop at any point and produce a stereopticon effect; the tilting device which permits the raising or lowering of the machine without the use of books or other articles to get the picture properly centered; another is the utility light which enables the operator to prepare the succeeding film without turning on the generator lights. All of the improvements may be

had at small cost and may be incorporated while the machine is being inspected and serviced.

Anchor Fences for Schools

The Anchor Post Fence Company, of New York City, has issued its new Catalog No. 67, illustrating and describing its Anchor fences for schools.

The catalog contains 24 pages devoted to descriptions of chain-link lawn fences, fences with top rail, and fences of the types Co, Ct-1, Do, and Dt-1. The fences are made in heights from 5 feet to 10 feet, are unclimbable, and are used for a wide variety of purposes. All fences are furnished with the new square terminal post, which is used at the ends, corners, and gates. The post because of its graceful lines, adds to the good appearance of the fence as a whole.

The booklet contains specifications and detailed information concerning fences and their installation for the benefit of school officials and architects. It is a real reference work.

Information concerning the Anchor line of school fences may be had by writing to the Anchor Post Fence Co., at 3 East 38th St., New York, N. Y.

School Furniture for the Crippled Child

The American Seating Company has issued a twenty-page catalog, illustrating and describing school furniture for the use of the crippled child. The booklet shows examples and uses of universal movable desks and seats, desks with special attachments for particularly difficult cases, and adjustable pedestal swivel desks and chairs for use at tables.

The booklet is more than a mere catalog. The entire problem of making the crippled child comfortable at school and at home study is discussed in a thorough, but popular style. The guiding principles which school physicians and other school authorities must follow are presented. Various clever pads and adjusting devices are illustrated.

The American Seating Company also manufactures an adjustable box desk and chair, and a special New York style fixed desk and chair with adjustable back and side arms. Each of these is valuable for certain types of deformities.

The booklet also gives a table of sizes for various types of desks and seats and show how each of these may be used.

Interesting Durabilt Folders

The Durabilt Steel Locker Company, Aurora, Ill., has just published two interesting folders under the caption, "There's a Durabilt Locker for Every Requirement," and "Let Durabilt Solve Your Locker Problems." The adaptability and the service of Durabilt lockers in meeting every locker requirement is presented in a most interesting and illustrative way. Copies of these folders sent on request.

New Beacon "Foldup" Chair

The Beacon Steel Furniture Company of Chicago, Illinois, has issued a four-page folder, describing and illustrating a new steel folding chair which has just been marketed. The "foldup" is made entirely of steel, with the exception of the seat and floor contacts, and is provided with a back of ample proportions correctly curved to induce proper



THE NEW BEACON "FOLDUP" CHAIR.

posture. The chair folds easily and quickly to a thickness of only 1 3/4 inches and a seat will fit nicely into a small space. The chairs come in a variety of colors and seat materials. The "foldup" chair insures comfort and sturdiness, within the reach of the ordinary purchaser of school furniture, and makes it possible to store a large quantity for emergency use. It is sold at practically the same price as a good wood folding chair and is almost indestructible in general use.

Information concerning the Beacon "foldup" chair may be obtained by writing the Beacon Steel Furniture Company at 1841 Carroll Avenue, Chicago, Illinois.

Here is a Book that *Every* High School Principal *Should* Read



EVERY High School Principal should read this new book on "High School Administration," written by a nationally known authority on this subject, and which is now ready for release by Rand Kardex Service.

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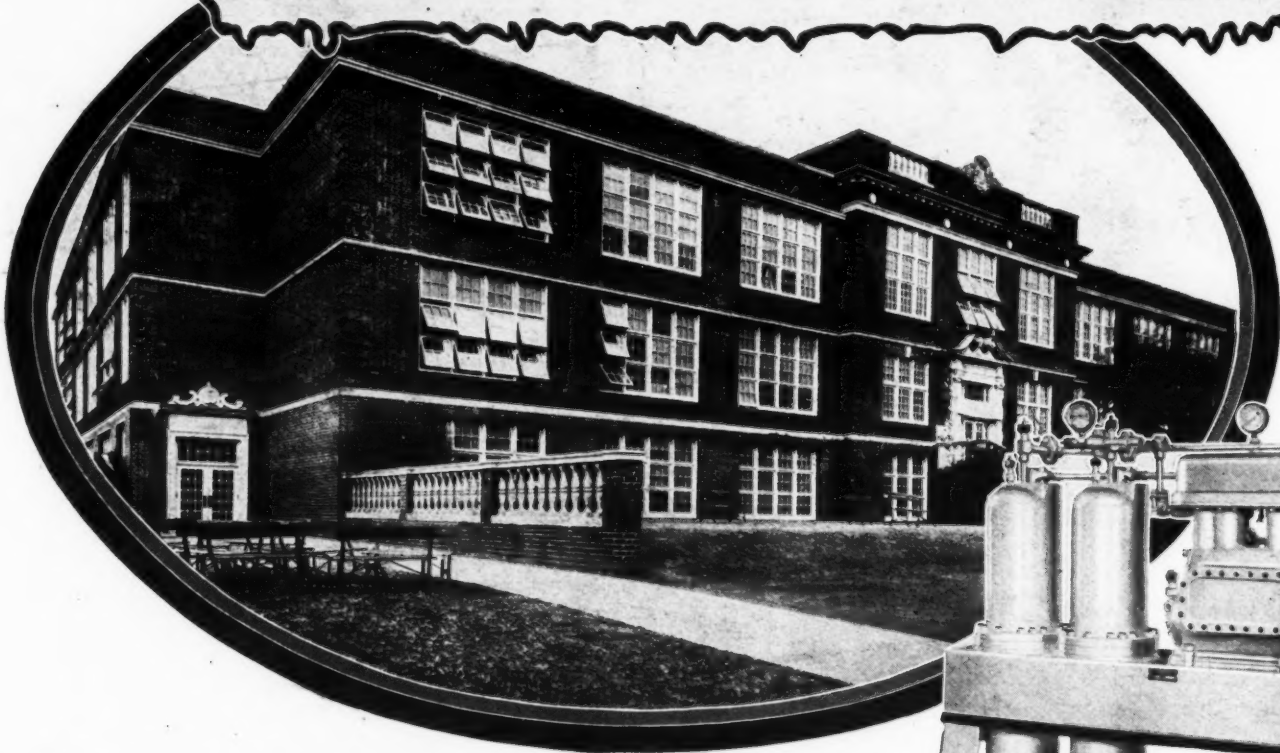
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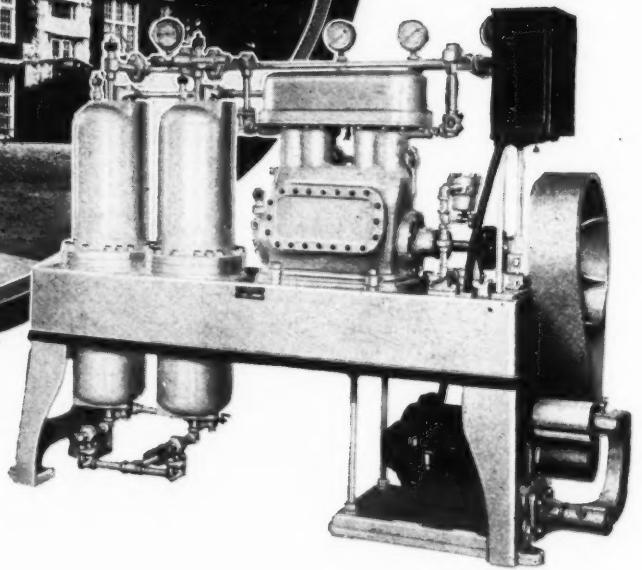
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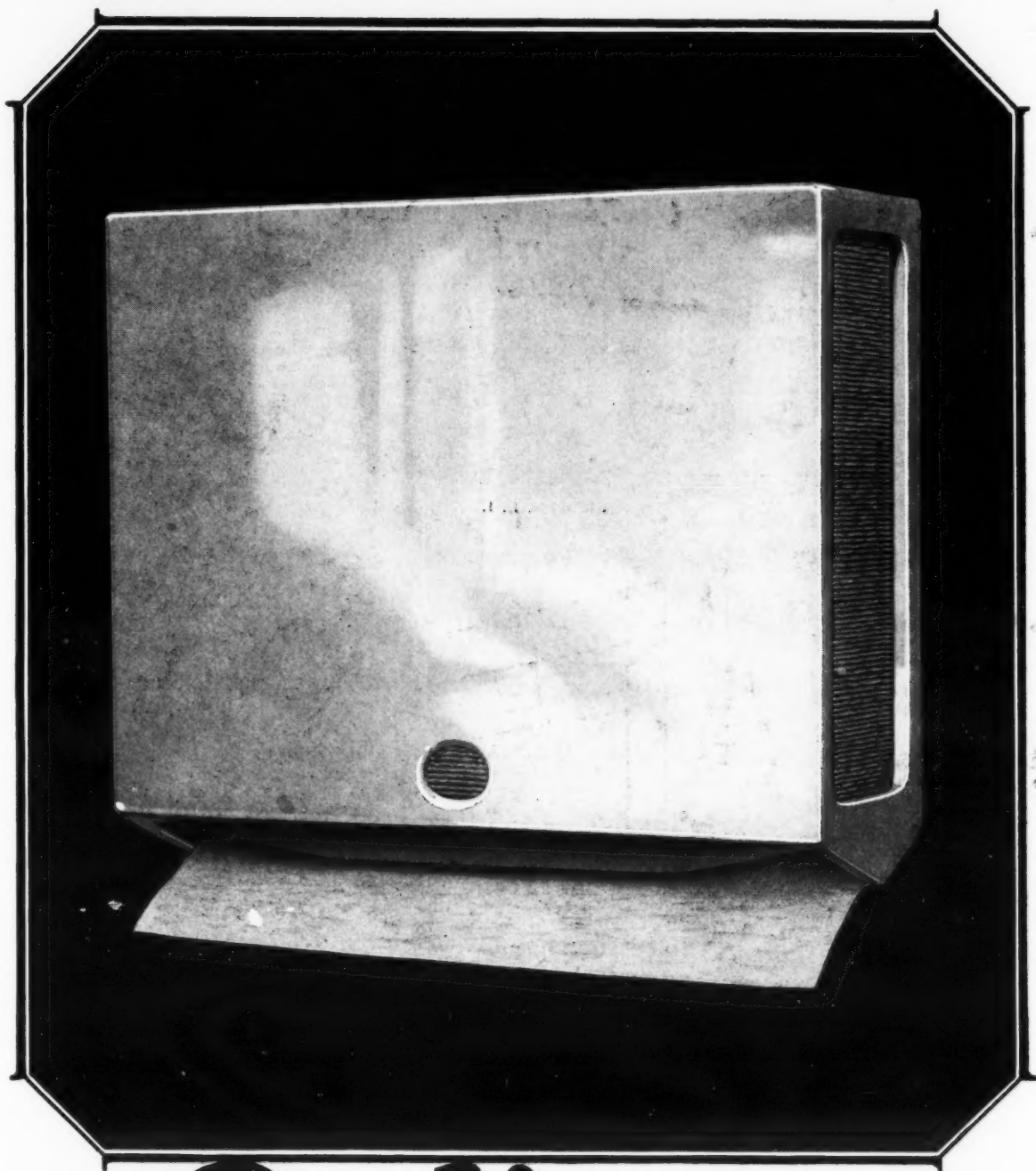
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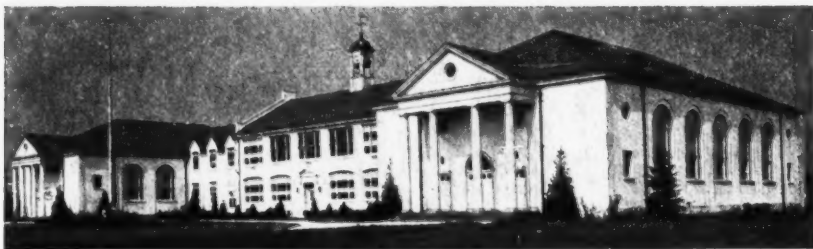
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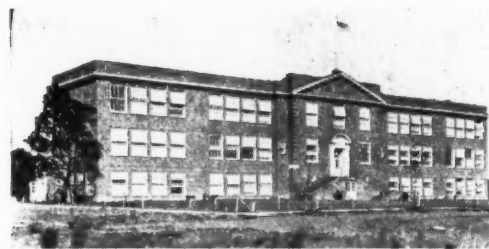
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